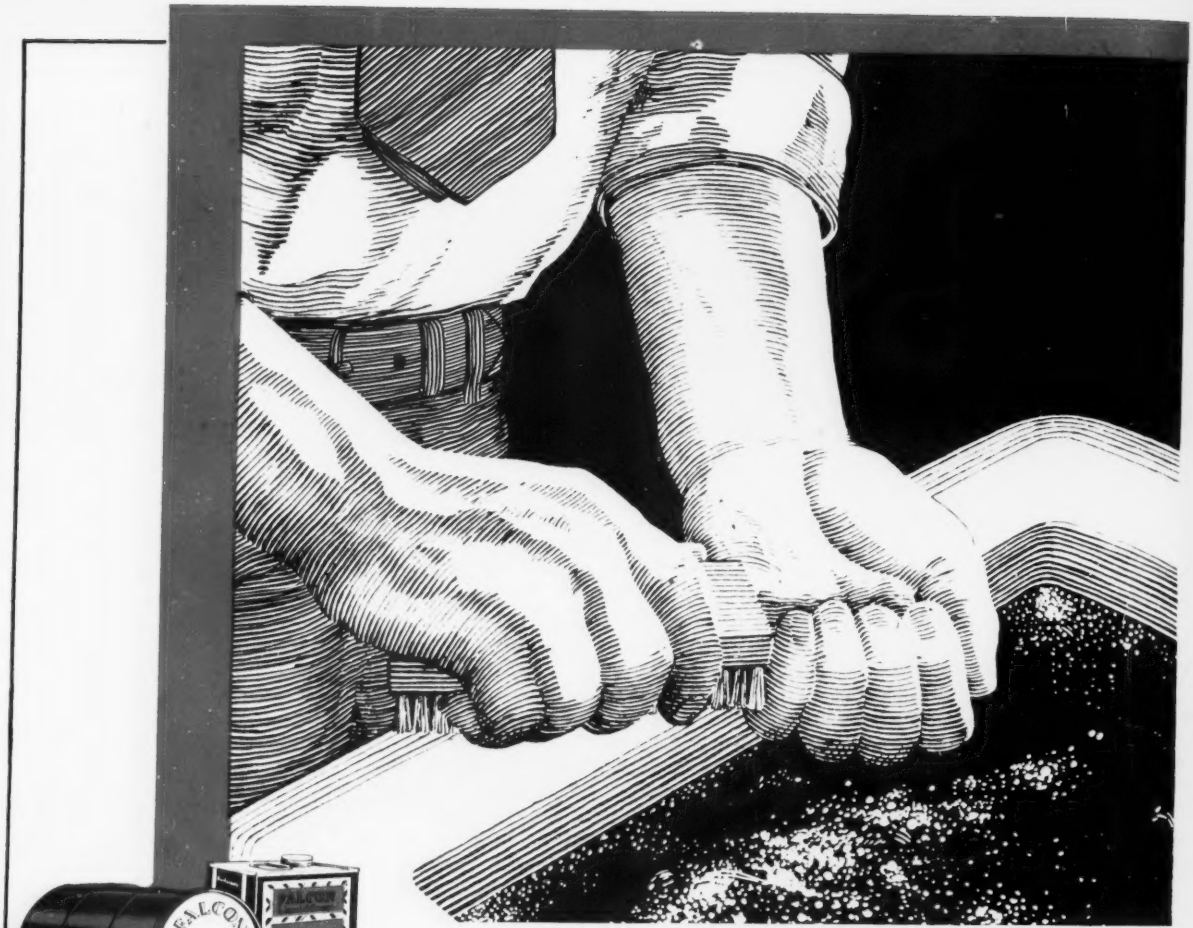
Vol. XI, No. 2 February 1935

SOAP

Reg. U. S. Pat. Off.

SOAPS • INSECTICIDES • DISINFECTANTS • POLISHES
EXTERMINATING • CLEANSERS • SANITARY SUPPLIES



FOR CUSTOMERS
Hard-to-Please

FALCON 40% CONCENTRATED LIQUID TOILET SOAP

FALCON 18% LIQUID SOAP

U. S. GOVERNMENT STANDARD LIQUID TOILET SOAP

MECHANICS GRADE LIQUID TOILET SOAP

62% COCONUT OIL SOAP BASE

You've met him—the customer who is very particular. If he seems hard to please, it's because he knows values and can't be fooled.

Falcon soaps are made for the most critical customers. Tested for purity or performance, they readily prove their superiority.

For Falcon Liquid Toilet Soaps are made with what we believe is the greatest care and highest skill ever combined in the manufacture of toilet soaps. Only edible cochin coconut oil is used. The glycerine content is left intact. That is why each Falcon soap gives such mountainous lather, leaves the skin so creamy soft.

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EAGLE SOAP CORPORATION
HUNTINGTON INDIANA

Falcon Liquid Toilet Soaps

PRODUCTS
FULD MAKES
for the
LEADERS

LIQUID CLEANERS
- Pine Scrub Soap
- Sassafras Scrub Soap
- Floor Bleach
- Rug Shampoo

OIL and SOFT SOAP
- All Percentage Oil Soaps
- Jelly Soaps

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- Cresol Compounds
- Chlorine

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- Cattle Sprays
- Pyrethrum Sprays
- Moth Spray
- Sprays for Special Purpose

FLOOR WAXES and SEALS
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- Liquid Wax
- Wood Seal
- Gym Seal
- Terrazzo Seal
- Wax-Var
- Paste Wax
- Dance Floor Wax

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- Metal Polishes (Liquid, Paste & Powdered)
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- Furniture Cream
- Furniture Polish
- Floor Oil

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- Liquid & Powdered Bowl Cleaners
- Tile & Enamel Cleaners
- Boiler Compounds

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- Window Cleaner
- Scouring Compounds
- Fabric Cleaners
- Weed Killers
- Waterless Cleaner
- Beer Coil Cleaner
- Paint & Varnish Remover

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- Forma Chloro Sprays
- Theatre Sprays
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DEODORANT BLOCKS and CRYSTALS
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- Urinal Strainers
- Wall Containers
- Soap Dispensers

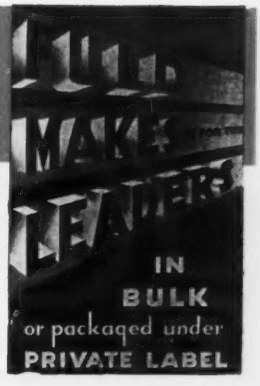
MADE to ORDER and REORDER!

FLOOR WAX

The standard of non-slippery luster for all floorings. Approved by Rubber Floor Assn. and leading linoleum makers.

There's something about each Fuld Product that makes it stick where you put it. Each product is made to order for a particular job, — a more particular user — and the most particular dealers.

FULD



FULD BROS. INC.
2310 FREDERICK AVE.
BALTIMORE, MD.

SOAP

Reg. U. S. Patent Office

Volume XI
Number 2

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February, 1935

MEMBER AUDIT BUREAU OF CIRCULATIONS

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NRA CODE 1934

Published monthly on the 15th by

MAC NAIR-DORLAND COMPANY, INC.

254 WEST 31st STREET NEW YORK, N. Y.

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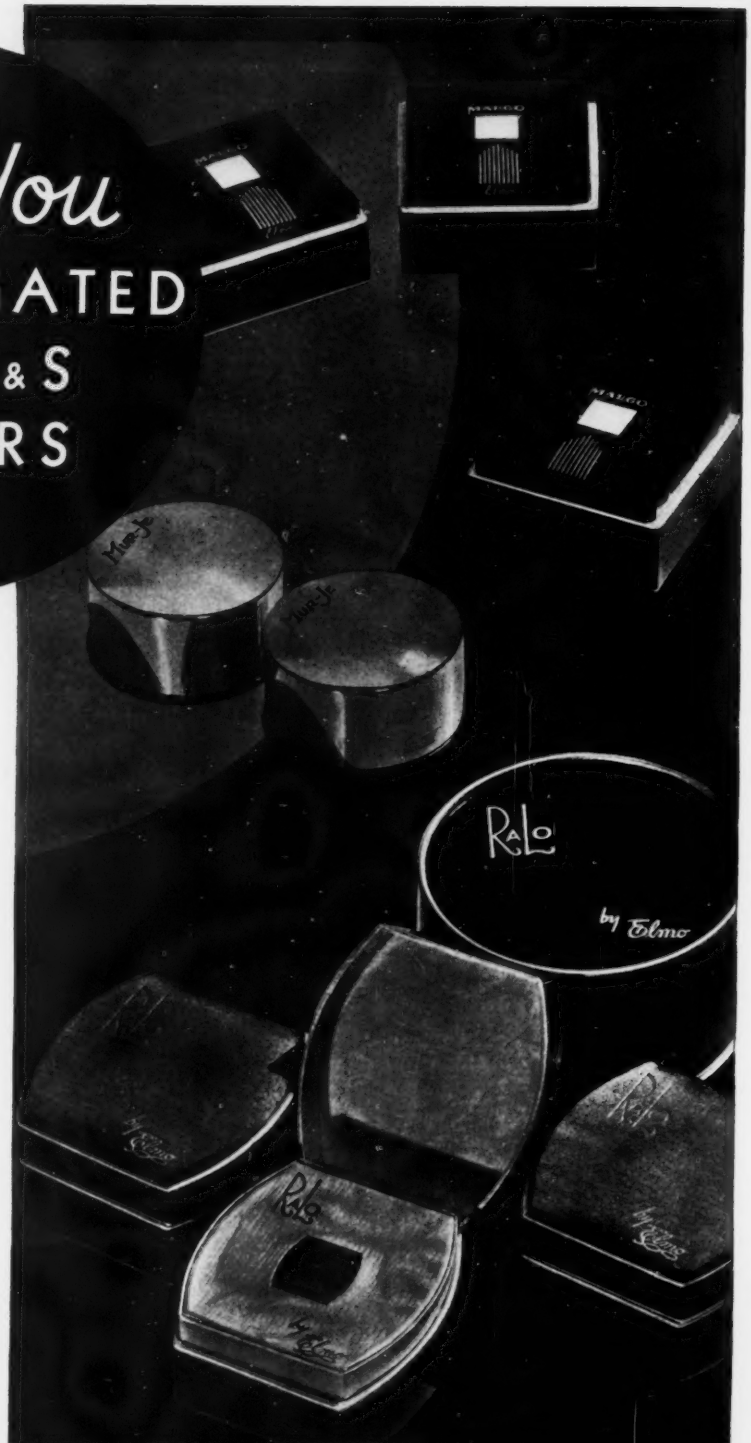
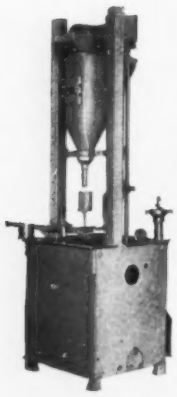
HAVE *You* INVESTIGATED THE S & S FILLERS ?



AT the plant of Elmo, Inc., Philadelphia, cosmetic manufacturers, an S & S Universal Filling Machine is used to fill a wide assortment of Elmo Powders, packaged in containers of many different shapes and weights.

Despite the relatively low cost of the S & S Universal Filler it has given long, dependable service in countless plants in every part of the world. Its smooth speed and uncanny accuracy have made it a paying proposition to large and small manufacturers alike.

It may pay you to investigate the S & S Fillers. An S & S Engineer will be glad to give you the details without obligation. Or, if you prefer, write for descriptive literature



STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

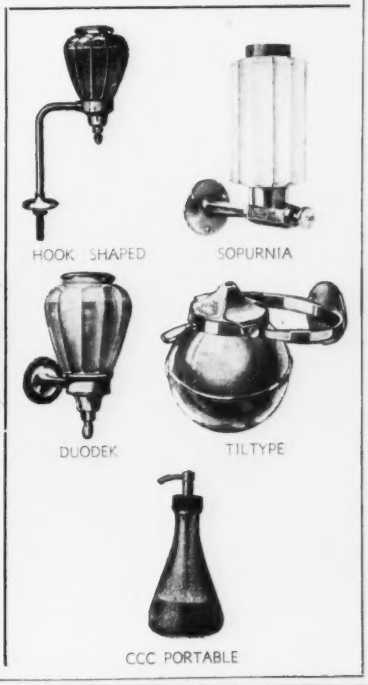
4915 Summerdale Ave., Philadelphia, U. S. A.

British Office: 23, Goswell Road, London, E. C. 1

MR. JOBBER:
You can CLEAN UP with this Dandy NEW Dispenser!

CLIFTON takes pride in introducing the NEW MODERNE dispenser . . . which has the beauty of a truly modern design with a fine chromium finish. The unit fills from the top. It has a double seat leak proof valve and replaceable crystal globe.

This dispenser LOOKS expensive, yet costs under a dollar each in dozen lots. The MODERNE DISPENSER combines beauty, service and low price. Send for a dozen and be convinced.



CLIFTON CHEMICAL CO.
CLIFTON BUILDING
246 FRONT STREET NEW YORK

OTHER CLIFTON MONEY MAKERS:—

Semi-Castile Liquid Soap	Dazzle Metal Polish	Shampoo
Cresolene Disinfectant	Sprinklets	Theatre Spray
Deodorette Cakes	Grade "A" FurnitureCream	Chewing Gum Remover
Shine Brite	Insectol	Velotone Shaving Cream
Foamwel Liquid Soap	Moth-Blite Frost	Velvet Shampoo Base
Pine Gloss Cleanser	Lemon Oil	Velvetone Shaving Cream
Rub-No Wax	Insto Spot Remover	Crystal Shampoo Base

If you can't improve the Product . . .

—how about the Package?

TIME after time, a product has been lifted out of a sales slump by a worth-while improvement in the package . . . Here are two ways to increase the sales-pulling power of your package—(1) Improve its general appearance, its attention value, and the quality of the wrapping. (2) Give it a special form of wrapping that will set it apart from competitors—make it distinctive.

Our machines wrap the vast majority of toilet and laundry soaps. Many of these machines have been specially designed to produce distinctive types of wrapping. All of them are noted for their efficiency and low-cost operation.

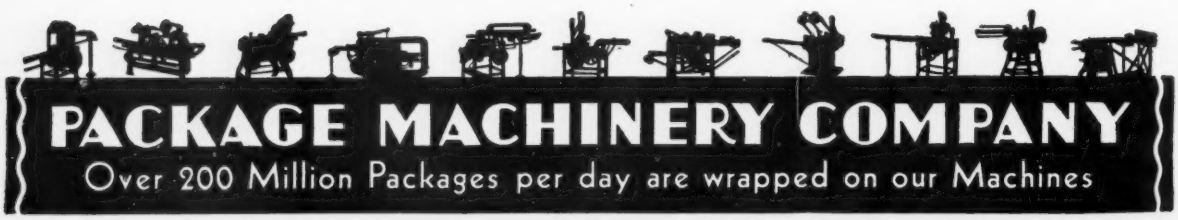
In short, we have the machines, the experience and a knowledge of modern packaging trends, to help you carry out your package improvements. Why not consult us? Write to our nearest office.

PACKAGE MACHINERY COMPANY

Springfield, Massachusetts

NEW YORK CHICAGO CLEVELAND LOS ANGELES

Peterborough, England: Baker Perkins, Ltd.



COLOR

MAKES YOUR PRODUCT EASY TO SEE EASY TO SELL

Dress up your product with Maryland Blue Bottles and Jars. The brilliant blue catches the customer's eye. Suggests quality. Makes the product easier to identify. Result—your product is seen, recognized and bought more frequently.

Write for Samples. Maryland Blue Bottles and Jars are made in a wide variety of stock shapes and sizes, particularly suitable for liquid soaps, creams, shampoos, shoe polishes, furniture and automobile polishes. Please tell us the nature of your product and the sizes in which it is packed. Maryland Glass Corporation, Baltimore, Maryland. New York Representative: 270 Broadway, New York City. Pacific Coast Representative: Owens-Illinois Pacific Coast Company, San Francisco.

MARYLAND BLUE BOTTLES

MARYLAND GREEN TINT AND FLINT BOTTLES ARE OF THE SAME HIGH QUALITY AS MARYLAND BLUE

CARBON TETRACHLORIDE MERCK

Clear, colorless, and free from suspended solid material. Guaranteed purity 99.9 per cent. Non-inflammable and non-explosive in either liquid or vapor state.

This product is used as a dry-cleaning agent; as a spot remover; as a solvent for removing grease, wax, chewing gum, etc. from floors, carpets and upholstered furniture; as a vehicle for stove and shoe polishes; for de-greasing and cleaning machinery, leather, etc.; in paint and varnish removers and in rubber cement; and for killing moth and insect life.

Write us regarding your manufacturing problems and requirements.

Other Important Merck Products

✣

CHLOROPHYLL
METHYL SALICYLATE
BENZIN
SODIUM HYDROXIDE
CHLOROFORM
ETHER
BETANAPHTHOL
DISINFECTANTS

MERCK & CO. Inc. *Manufacturing Chemists* RAHWAY, N. J.

NEW YORK PHILADELPHIA ST. LOUIS

IN CANADA: MERCK & CO. LTD., MONTREAL AND TORONTO

STILL SPARKLING CLEAR AT 4° BELOW ZERO C.!

TRY this test on the liquid soap you are now buying -- particularly the concentrated (40%) which you are using as a base to produce liquids of lower soap content.

"BUCKEYE" and "GEM" concentrate liquid soaps remain absolutely clear at temperatures below zero C., lending themselves perfectly for use at all temperatures as a base in producing liquids of lower soap content.

Just dilute them with distilled water --- no need whatever for any filtering.

Send for samples and prices. No obligation.

THE DAVIES-YOUNG SOAP CO.
Dayton, Ohio

"BUCKEYE" CONCENTRATE
and
"GEM" CONCENTRATE
Liquid Soaps

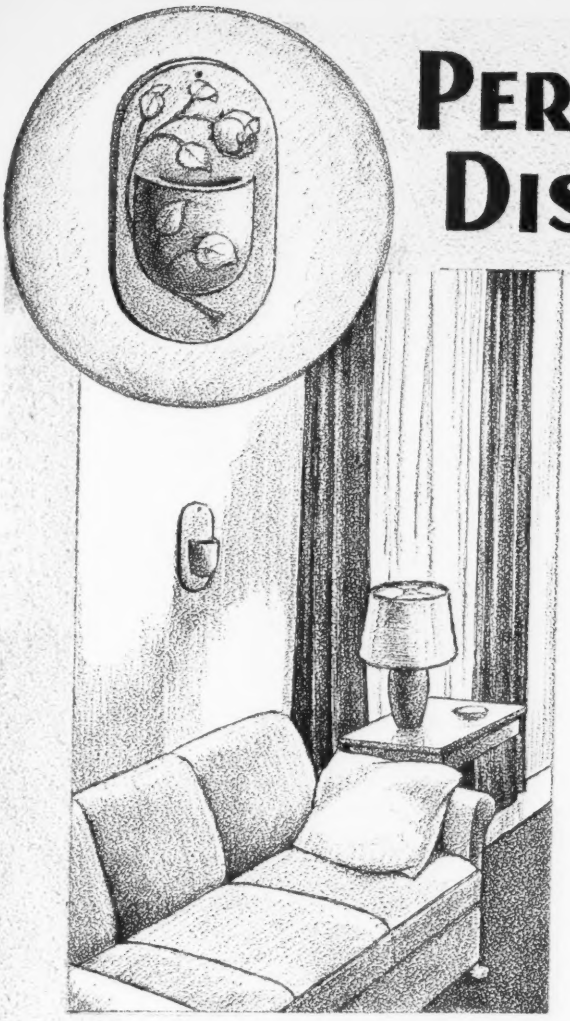
DOW ORGANIC SOLVENTS

PRODUCT	DESCRIPTION	USES
CARBON TETRACHLORIDE	Heavy, water-white liquid with an aromatic odor and a sharp taste. It is non-flammable and non-explosive in either the liquid or vapor state. It is completely volatile, leaving no residual odor. Boiling point—°C.....76.8 Flash point .....None Weight per gallon—lbs.....13.25 Solubility—Miscible with most organic solvents; practically insoluble in water.	Degreasing textile fibres, cleaning and spotting textiles and clothing, and degreasing and cleaning machinery, leather, paper stock, and photographic films. Extracting fats, oils, waxes, alkaloids, and resins. Ingredient in paint and varnish removers, and in rubber cements. Fumigant for moth and insect life in textiles, furs, and grains.
CHLOROFORM TECHNICAL	Clear, colorless, volatile liquid with a sweet taste and a characteristic odor. Its vapors are highly anaesthetic and are non-flammable. Leaves no odor after evaporation. Boiling point—°C.....61.2 Weight per gallon—lbs.....12.51 Solubility—Miscible with most organic solvents; slightly soluble in water.	Solvent in the rubber, photographic, and dry cleaning industries. Dissolves alkaloids, fats, and resins. Should not be used as a cleaning agent for cellulose acetate (celanese) fabrics.
ETHYLENE DICHLORIDE	Clear, water-white liquid with a pleasant chloroform-like odor. It is only slightly hydrolyzed in water. Boiling Range—°C.....83.7—84 Flash point —°C.....12 Weight per gallon—lbs.....10.5 Solubility—Miscible with most organic solvents; slightly soluble in water.	For cleaning and spotting work and for degreasing textiles, leather, and metals. For extracting natural oils from vegetable matter and in paint removers.
MONOCHLORBENZENE	Colorless, volatile liquid with benzene-like odor. Not considered a particularly dangerous solvent from a fire-hazard standpoint, although classed as a flammable material. Boiling Range—°C.....130.5—132 Flash point —°C. .....27.5—39 (Depends on Method) Weight per gallon—lbs..... 9.29 Solubility—Miscible with most organic solvents; insoluble in water.	As an ingredient in paint and varnish removers, as a general solvent, and in organic syntheses.
ORTHODICHLORBENZENE TECHNICAL	Oily, colorless liquid with a characteristic odor. Offers no special fire hazard, although it burns readily when ignited. Boiling Range—°C.....172—179 Flash point —°C.....between 63—77 Weight per gallon—lbs..... 10.7 Solubility—Miscible with most organic solvents; insoluble in water.	Solvent for waxes, ingredient in paint removers, and for removal of grease and tars from automobiles. Ingredient in sweeping compounds, an active insecticide in fly and other liquid sprays, and in manufacture of preservative paints. Recommended for control of termites.
PROPYLENE DICHLORIDE	Clear, water-white liquid with a sweetish odor. Not considered highly flammable, although flashes at room temperature. Boiling point—°C.....(when pure) 96.8 Flash point —°C.....16 Weight per gallon—lbs..... 9.62 Solubility—Miscible with most organic solvents; slightly soluble in water.	As a solvent in the rubber industry, as a paint and varnish remover, and as a general solvent. Used extensively, mixed with other solvents, for fumigating and dry cleaning, and also used in the manufacture of dry-cleaning soaps.
TETRACHLORETHYLENE	Clear, colorless liquid with a sweetish odor Boiling Range—°C.....118—122 Flash point .....None Weight per gallon—lbs..... 13.40 Solubility—Miscible with most organic solvents; insoluble in water.	As a general solvent, as an ingredient in detergent compositions, dry cleaning soaps, and as the liquid medium in transformers and high tension switches.
TRICHLORBENZENE	Colorless liquid Boiling Range—°C.....213—217 Flash point None to boiling point Weight per gallon—lbs..... 12.16 Solubility—Miscible with most organic solvents; insoluble in water.	As a dielectric fluid in fuses and, when mixed with suitable ingredients, in synthetic transformer oils. As a general solvent in the chemical industry and as a solvent for oil soluble dyes. As an addition agent in lubricating oils.

OTHER DOW PRODUCTS: COUMARIN • METHYL SALICYLATE • METHYL ANTHRANILATE
PHENOL • DOWICIDES (Disinfectants) • CAUSTIC SODA • PARADOW and over 200 others

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

BRANCH SALES OFFICES: TRADE DOW MARK 30 Rockefeller Plaza, New York City
Second and Madison Streets, Saint Louis



PERFUME DISSEMINATORS

open a huge market for the Perfume Industry . . . . . .

A manufacturer discovers that a mild, agreeable odor in a tastefully decorated display room materially improves the appealing quality of the room; a retail furniture store, an automobile sales salon find that a faint appropriate odor appeals to their customers. In theatres, homes, offices; in industrial use to disguise or neutralize disagreeable odors, the perfume disseminator has made a place for itself by giving character to a room, by making surroundings a pleasanter place to be in.

But the market for perfume, disseminated through artistic and appropriate disseminators has not been scratched. Felton has specialized in studying this market. They have a lot of information for the manufacturer or distributor who is interested in investigating it.

Write us for full information on this subject and for appropriate samples which we shall be pleased to furnish.

The proper odor for a disseminator must be developed with several special characteristics in mind. Just any perfume, no matter how pleasant, will not do. The perfume for a disseminator must have effusion, must be persistent, must be reasonable in cost and must be appropriate to the place in which it is used. Odors developed by Felton for perfume disseminators will meet any special requirements you have in mind.

FELTON CHEMICAL COMPANY

INCORPORATED

Manufacturers of AROMATIC CHEMICALS, NATURAL ISOLATES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

Executive Offices and Factory: 603 JOHNSON AVE., BROOKLYN, N. Y.

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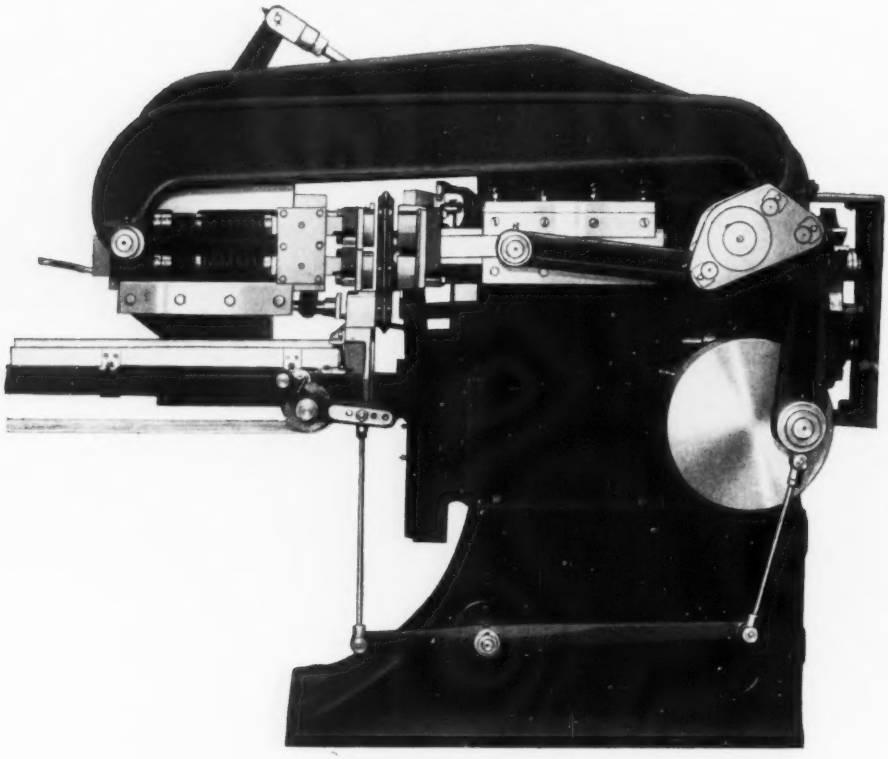
JONES
Laundry and Toilet Soap Press
DOUBLE TOGGLE STROKE



TYPE K

This press in duplex form will produce 250 cakes of toilet soap per minute. It is supplied only in simplex form for laundry soap to press from 90 to 140 cakes per minute. The picture shows a duplex press arranged for toilet soap.

The pressing mechanism is of the TOGGLE TYPE and produces a powerful and most efficient stroke for pressing soap. The DIES travel RAPIDLY toward the soap with a gradually slowing motion, which reaches a minimum when delivering the full power just when the dies are on the cake.

A LONG DWELL of the DIES on the SOAP is a vital feature and one not obtainable with any other type of pressing mechanism. Making the second stroke the dies leave the surface of the soap about one-fourth of an inch and return under full power, BRINGING OUT THE LETTERING AND LINES perfectly. The soap then is ejected from die box into a take-off chute, where it is pushed from behind the die box by a positive mechanism.

FEATURES tending to give long life to the machine are: BALANCE—LACK OF VIBRATION AT HIGHEST SPEED—BRONZE BUSHINGS FOR PRINCIPAL SHAFTS—and ZERK OILERS THROUGHOUT.

FED AND RUN TO CAPACITY BY ONE OPERATOR

R. A. JONES & COMPANY, Inc.

P. O. BOX 485 CINCINNATI, OHIO

The Standardized *Constant Motion Cartoner* packages bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds, and inserts direction sheets and corrugated board liners with the loads

NRA CODE GRAPHIC ARTS INDUSTRY 1934

SOAP

Volume Twelve **Number Two**

The Editor's Opinion

PRICE cutting through the use of "loss leaders" appears to have reached the attention of the President, judging by reports from Washington. Apparently codes are being flouted right and left by retailers all the way from Paducah to Podunk, and now it seems that somebody is looking to do something about it. New legislation perhaps, aimed directly at the "loss leader" evil. In the present enfeebled and uncertain position of the NRA, or more specifically that part of the NRA having to do with the distributing and merchandising trades, it seems that new legislation may have to be the answer. After years and years of battling with this "loss leader" problem, and seeing their goods sacrificed on the altar of the price-cutting retailer, there is little wonder that many manufacturers are skeptical. When it comes to the actual and complete elimination of the "loss leader", most of them are from Missouri—and so are we.

—♦—

TUCKED away in the body of the annual report of the president of the Association of American Soap and Glycerine Producers, presented at the New York meeting last month, was a statement which we consider of unusual moment. It had to do with the educational work of the Association as carried on by Cleanliness Institute prior to 1933. The significant part of the statement was this: "To all of us, it must be clear that we do not really help the soap manufacturing industry by simply concentrating our efforts upon *taking business from each other.* The larger question with which some day this Association should again deal is what program can be adopted that will effectively *increase the total use* of soap, soap products, and cleansers in the United States."

The italics are ours. To us, the words they emphasize are an epitome of the cause and the permanent cure for many of the merchandising and price troubles which beset the soap industry today. Taking business away from each other . . . for every conceivable sales and advertising device to accomplish just this in the present day competitive battle for business, the soap industry is spending millions. Millions to force this or that product to market in preference to its competitors, but only a few thin dimes to broaden the market itself . . . as soon as business drops off, all broad educational work is stopped, but the competitive fight to take business away from each other continues hotter than ever.

The work of Cleanliness Institute was not such that a dollar spent today brought two dollars in new business tomorrow. That is perhaps why the work was stopped at the end or 1932. It is an unfortunate thing that the results of such work cannot be immediately measured. It is also unfortunate that the average executive is opposed to spending money for things which do not show a quick return. Nevertheless, there is no doubt but that some further thought should be given now to resuming the general educational work aimed to increase the total consumption of all soap products. That the soap consumption of this country could be enlarged greatly is apparent when the situation is studied today and compared to that of a decade or two ago. To produce new business for the industry, rather than taking business away each company from the other, is certainly sound policy. Why not resume now this plowing back into the field of a small but definite part of income?

WHILE a cloudy liquid soap might be just as good as one that is transparent,—try to make your customer think so! Transparency is the popular test for quality. This commodity must have eye appeal. . . . This is the expression of opinion in a recent issue of *Chemistry and You,* published in San Francisco. There is no doubt about the truth of the statement. But it goes on to tell how a soap of brilliant transparency was produced by removing all the "troublesome impurities" from the city water which previously had caused the cloudiness. If impure or hard water used in dilution were the only cause of clouding, the problem would be easy.

THE present drive for a general thirty-hour week for industry by various groups of the American Federation of Labor is not a coincidence. It is a carefully planned campaign by labor to force legislation on Congress to give wider employment which it had been hoped would be obtained through the NRA. Labor is calling for a universal thirty-hour week with wages to remain per week the same as they are today for an average forty-hour week.

To industry, the mere thought of a further advance in labor costs of twenty-five per cent is disheartening to say the least. In the soap industry, already operating with a hundred per cent rise in fat costs in addition to labor costs advanced sharply a year ago, there would have to be corresponding rises in soap prices. The same would be true throughout the entire list of manufactured goods. Increased purchasing power of labor would only find a stone wall of sharply higher prices. Industry would naturally resort to drastic and revolutionary changes. In all, we believe that if labor forces the hand of industry too much, we shall indeed find ourselves in a sorry mess. Surely there must be a more sane and sensible means of solution.

WHEN it comes to the ordinary interpretion of the word "cosmetic", we think of creams, powders, rouge, and the like. In the general classification by the trade and by the laity, soap is not considered as a cosmetic. Webster says that a cosmetic is an external application intended to beautify the complexion or the hair. But when it comes to the Copeland Bill which is now treading its way through the devious channels of the law-making mill of Congress, "the term cosmetic includes all substances and preparations intended for cleansing, or altering the appearance of, or promoting the attractiveness of, the person".

Quite obviously, toilet soap is a substance intended for cleansing the person. Under the Copeland Bill definition, toilet soap is a cosmetic and nothing else. The term "cleansing", although it may have been meant originally in the minds of the writers of the bill to cover cleansing creams and lotions, very definitely includes toilet soaps within the scope of the proposed law. And therein lies the interest of soapers in the new food and drug bill,—the new bill which will very probably be passed by the present Congress in one form or another.

WITH the rise in oil and fat prices during the past six or eight months, refined fatty acids seem to be winning a new place in the sun. A greater leeway between cost and selling price, enables manufacturers to produce at a profit in competition with natural oils and fats. The fatty acid industry has been given a stimulus which, we believe, will result in a marked expansion in the consumption of fatty acids over the next few years. In soaps, textile specialties, fatty alcohol derivatives, various emulsions, and the like, we see a constantly widening of their use. The commercial production particularly of highly refined products suitable for specialized uses and not heretofore available, opens the way to new and larger markets. With a reduction in the cost of fat splitting as time goes on, we feel that the fatty acids generally are destined to play a larger part in the scheme of fatty raw materials for industry.

SOAP from wood is now being studied in Germany, according to the trade press of the paper industry. By-product fatty acids from chemical pulp are heralded as possible saviors of the German soap maker, particularly in view of the present shortage of fats in that country. It is interesting to note that in the United States, these by-product fatty acids of paper manufacture have been commercially available in a highly refined state for three or four years past. In the light of present oil and fat prices, they become rather interesting products for the soaper.

LAVENDER OIL

A Critical Analysis of the Present Price Development

By DR. ERNEST GUENTHER

Fritzsche Brothers, Inc.

FREQUENTLY I am asked what is happening to lavender oil and the question is not infrequently accompanied by an air of astonishment, if not indignation, as if the exporters and importers were to blame. The truth is that a substantial advance in lavender oil prices could be foreseen by anyone who has had occasion to follow carefully the development of lavender production in Southern France. Without doubt, lavender oil reached heights more spectacular than most American dealers could possibly expect,—otherwise we would have made a great deal of money,—but it was clearly evident that lavender could not long remain at the abnormally low levels of 1932 and 1933 unless the whole lavender industry in Southern France collapsed and gradually became extinct. In an article on lavender production published in SOAP, December, 1932, the writer predicted:

"I do not believe that oil of lavender can remain at the present low price levels very long . . . . The 1932 harvest of oil of lavender was very much below a normal crop which is perfectly clear to anyone who has known the extensive and beautiful lavender plantations of a few years ago. Last August, they appeared neglected, full of weeds, and often they were completely abandoned. At present, cultivation of lavender flowers on a large commercial scale and production of oil in modern steam-distillation plants is entirely out of the question. Even the farmer-distillers see no profit in their small lots of planted or plowed wild lavender and can hardly be induced to continue this home industry unless prices for oil of lavender rise considerably. We must always keep in mind the fact that no new plantations, planted or plowed, are being started at present, nor have they been started during the past two years to replace the old ones which will die out sooner or later. Of course, there will always be the wild plants to resort to in case of increased demand for oil; but the cutting of wild flowers is more difficult and therefore, more expensive."

The situation of 1932 became accentuated in 1933 and critical in 1934. The ancient law of supply and demand caused the pendulum to swing back in favor of the peasant-growers of lavender and in turn to get the better of the exporters, especially those exporters of oil who in 1932 had made long term contracts abroad based on low prices. To understand the situation, it must be remembered that the bulk of lavender oil during all the

years of low prices was almost exclusively distilled by the small farmer-growers and not by the big distillers. The latter had been forced to close down their factories as early as 1929 and 1930 when they could no longer compete with the small producers. In the article mentioned above, the writer explained why the big distillers, despite their modern and more efficient plants, are greatly handicapped in regard to overhead, high cost of production (paid labor, salaries of superintendents, cost of fuel, etc.) irregularities and frauds in flower supply, whereas the small farmer-distiller does the distilling of his own flower supply, cut from his own nearby plantations, in between his other harvests when there is little else to do. Since he never considers his or his family's labor, nor any overhead expenses, he easily underbids the large scale distiller and actually forces him out of production as soon as prices for lavender oil fall below 200 to 250 francs per kilo.

However, when in 1932 and 1933 prices dropped below 75 francs per kilo for high grade oil, even the small farmer-distiller had no further interest in continuing his plantations because the mere keeping up of the plantations and the weeding out demanded more labor and time than the oil brought in returns. Old plantations died out and were not replaced by new ones. Existing plantations were so overgrown with weeds that the mere sight of these neglected fields was pitiful to a lover of that exquisite plant. These conditions prevailed throughout 1933 and 1934.

Of course, one could claim that there is always ample wild growing lavender available whenever the flower supply from the plantations fails, but in respect to wild growing lavender plants too, something has happened it appears. It seemed to the writer while traveling through the lavender districts in the last few years that lavender flowers no longer grew so abundantly along the road as they did even four or five years ago. It was customary then to stop the car, for instance on the famous road from Castellan to Barreme, and pick for fellow-passengers a few bunches of the fragrant flowers which grew abundantly among the rocks along the road, but of late years it was sometimes difficult to find flowers. They seem to have become less plentiful in those sections. Years ago, the mountain slopes during the period of lavender bloom often appeared bluish, but nowadays this is much less the case. Several explanations for this phenomenon are given by native lavender experts. Some blame an insect, *terina marginita*, for part of the damage, while others claim that tht profusely growing genet (broom) is crowding out lavender more and more. Still others believe that serious harm has been done to wild growing lavender by ruinous cutting in the years of high lavender prices dating back to 1927 and 1928 when the harvesters were interested in cutting the wild growing plants as low as possible in order to increase the weight of their daily harvest. At any rate the substantially reduced output of lavender plantations, together with the somewhat lowered production of wild growing lavender, brought about a serious shortage of total lavender oil production in 1933 and 1934. A normal yearly production of lavender oil may be assumed as a quantity of 120 tons. It fell to 70 tons in 1932, to 40 tons in 1933, and about 45 tons in 1934. This abnormally low production during the last two years was caused also by bac weather prevailing throughout the summer months.

The situation therefore became quickly alarming as soon as the world economic situation, at least in America and England, had somewhat improved and brought about a certain demand to replenish stocks which had been kept low during the years of depression. Some lavender exporters during the years of extremely low prices of oil had made long term contracts and were caught rather short at the beginning of the 1934 harvest. When suddenly realized in its full meaning, the unexpected low total of production caused somewhat of a shock and the situation became more tense when prices began to rise. Farmer-growers knew only too well that the turn in their favor had arrived and that the exporters, especially those who had old contracts abroad, were more or less at their mercy. Prices mounted and exporters worried about a possible further rise, came to a hurried agreement among themselves not to purchase from the small distillers any lavender oil of 40 per cent ester content above 150 francs per kilo. In the previous year prices had been as low as 80 francs per kilo, but the exporters realized that the growers and peasant-distillers were entitled to some profit if the industry was to be kept alive at all. A price of 150 francs per kilo may have seemed adequate to the exporters but not to the growers who took advantage of the actual shortage and refused to sell at 150 francs, hoping for much higher prices such as had been paid, for instance, in 1925. The agreement of the exporters soon collapsed and prices continued to rise until they exceeded 220 francs per pound. As in the case of other commodities, during all the years of world depression, there had been a tendency among manufacturers to keep the stocks of lavender oil at low levels and now all became afraid of being left without stocks and there set in a general movement to cover future requirements. This made the situation even worse, because only a few tons of oil were left on the market.

WHAT will be the future of oil of lavender? Under actual living conditions in France, 150 francs per kilo should be accepted as a normal level below which farmer-growers cannot be induced to start new plantations to replace the old ones. Therefore, we can hardly hope for such low prices again as prevailed in 1932 and 1933. So far, we have analyzed the price development of lavender oil only in regard to France. For oil imported into the United States still another factor must be considered. Strangely enough this second feature is not always fully realized. It seems that the new gold policy of the United States is not yet quite understood. Some manufacturers acclaim the new dollar as promoting export business, but they forget that there is another angle to it insofar as prices of all imported commodities

must necessarily go up. While it is the express purpose of dollar inflation to raise prices, this very fact is resented by buyers confronted with the new quotations. The American dollar abroad is now worth only 59 cents. Therefore all products imported from gold standard countries must automatically be higher by about 61 per cent.

We have seen how the price of lavender has almost tripled in French francs. This, coupled with the lower dollar value explains why oil of lavender imported into America costs about five times more than in 1932. Such development naturally brings this oil beyond reach of the average soapmaker in America. Prices of finished soap have not yet advanced in proportion to higher costs. Fats and vegetable oils have become much more expensive. A five times higher price for any perfume material practically makes its use prohibitive as far as soap is concerned.

The question is often asked by American buyers:—why doesn't France go off the gold standard so that she can export at lower exchange rates and thus remain competitive on the world market? Surely there must be reason for this obstinate adherence,—for this desperate clinging to a standard which is proclaimed antiquated and even dangerous by the English and American disciples of Keynes' School of Economics. Old thought and experience clash with modern conception of monetary policies and the outcome of the experiment is yet uncertain at best.

To appreciate the French attitude, it is necessary to understand the psychology, and the mental set-up of the French people. The average Frenchman is a modest, peace-loving and parsimonious fellow who works and saves his pennies in the hope of retiring some days on the returns of an accumulated small capital. France is still the country "par excellence" of the small "rentier" who dreads nothing more than insecurity, political or economic. This "petite bourgeoise" was awakened by a rude shock when in 1924 inflation of the French currency suddenly wiped out 80 per cent of his life savings and almost broke this solid backbone of French tradition and civilization. It was only through the heroic battle of Poincare, through great sacrifices and a fine display of national discipline that this "financial battle of the Marne" was finally won. Most Frenchmen still remember those days with some kind of horror and they do not believe that another like victory could be won should the French franc be again exposed to a similar onslaught. France distrusts her own politicians and therefore any monetary experiments which might eventually, though not necessarily, lead towards inflation are apprehended with the gravest of suspicion. No French government could survive at present that would dare to advocate going off the gold standard.

Thus France is in a grave dilemma. "To go off gold or not" is the question and the fight has only begun. Between the "devil" of discarding gold with possible currency inflation and the "deep sea" of radical price deflation, the way out of the depression is hard to choose. and France does feel the world-depression nowadays with increasing weight. So far the general sentiment of the French people is absolutely in favor of remaining on gold but they have not yet fully experienced the ravages frequently accompanying deflation such as general insolvencies, mounting indebtedness and other disastrous effects. Unless France can manage by strict national discipline and nationally planned economics to become self-sustaining and rely for export and import only on her own large colonies, she must choose clearly between lowering her exchange rate or deflating her prices. France has enough gold reserves to withstand for a long time any outside attack on her gold standard, but nevertheless the issue must be faced sooner or later. A deflationary price movement may be the more secure way in the long run but in the beginning is certainly the more painful one. It means further lowering of all prices in France by about 40 per cent to the level of the dollar and the pound which will permit France to compete with those countries off gold, particularly America. There is no other way; "one cannot have his cake and eat it," as the familiar saying goes.

IN ORDER to apply this theory in our case, lavender oil in order to be exported and employed by manufacturers in countries off the gold standard, should become much cheaper in price of French francs, a fact which the French lavender growers will not countenance. Instead of going down, lavender prices in France have tripled while the country remained on the gold standard. The surprising fact about the whole situation is that the French lavender producers are just as unaware of these economic truths as the majority of the American people are about the meaning of inflation. Consequently, lavender prices will remain high in terms of francs and much higher in terms of dollars, unless France goes off the gold standard which is quite improbable for some time to come.

Such high prices will most likely cause considerable damage to the French lavender industry in general because more and more American manufacturers, especially soapmakers, will be forced to substitute for French lavender oil suitable low-priced synthetic products. Already quite good artificial lavender oils are offered on the market and they are enjoying good sales. Undoubtedly they will be continuously improved. The toilet article manufacturers might be able to support the higher prices for lavender oil, but not the soapmakers, who are too much limited by the cost of a cake of soap. It must be remembered in this connection that the bulk of oil of lavender used in the United States is employed in soap.

Seen from another angle, it appears that there is strong need for another source of supply of oil of lavender as long as France insists on high internal prices and yet clings to the gold standard. With Italian lavender oil, the case is similar because Italy, too, is trying to remain on gold. There is talk about lavender oil to be produced

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Soap Costs,--And Taxes

Are Soap Manufacturers Paying Taxes on Profits Not Actually Earned Because of Inadequate Plant Cost Systems?

By L. J. MUEHLE

PRIOR to 1914, or before the first income tax law was passed, soap manufacturers in common with other manufacturers, usually made every legitimate effort to present the best financial statement possible to their stockholders, their bankers and creditors, and to others interested. To achieve this end; methods bordering on the questionable were employed at times, such as pricing inventories at cost or market, which ever was higher, and not which ever was lower, arbitrarily inflating inventories of finished goods, and appreciating capital assets at re-appraised values rather than providing ample reserves for depreciation. These practices never should have been tolerated, and today are severely condemned. At that time, competition was not as keen as it is today, the battle for "a place in the sun" not so severe, income taxes were not to be reckoned with, and cost accounting was not accorded its important place in the scheme of successful management.

In contrast, conditions today are vastly different. To provide revenue, for the ever-increasing and pyramiding administrative budgets, recourse is had to taxation, and then some more taxation, and to augment the collection of all that the traffic will bear, industry is burdened with searching investigations into incomes and so-called excess profits. Due to changing social and industrial demands, the importance of efficiency in business organization has never been so generally recognized as at the present time. Transformed to some extent, these changes meet the manufacturer in two demands. He must either adapt his methods to meet the situation or retire from the field. Only one practicable road lies before him, and that is a keener realization of the existing possibilities in his business.

Many of our soap manufacturers have not kept abreast of the times. Many are pessimistically indifferent and some sublimely ignorant to the many essential and vitally important facts obtained from a scientific cost accounting system, as a result of which they frequently pay taxes on profits not yet earned.

This statement does not mean that the manufacturer does not figure his costs, for every manufacturer, no matter how crudely it may be done, must do some sort of figuring on his cost in order to arrive at a selling price. The trouble, in the majority of cases, is that the manufacturer has no systematic method of figuring costs and has no way of proving his cost estimates after he has made them.

In the manufacture of soap, and for that matter, in any line of endeavor, the satisfactory functioning of a cost system does not lie in the knowledge that the cost ledgers are tied up with the general books. The success of the business does not radiate around the fact that the factory ledger is in balance with the controling accounts on the general ledger. The manufacturer is not preeminently concerned with the cost of manufactured goods, which includes finished goods not yet sold, nor will he lose sleep if his knowledge of the cost of goods in process is somewhat limited at the moment. But he does want to know, and he wants to know now, today, not on December 31st or July 1st, what are the earnings on the capital invested and what are the profits on the soap sold, not on the inventory on the warehouse floor. A cost system is not practical or financially profitable, unless it is an integral part of the monthly or daily "profit and loss account," rather than merely an asset account in the balance sheet.

Analytical information is required as to the relationship, "inventory of finished goods" in the warehouse to "net profit on operations" on the operating statement, on which income taxes are paid. Analogously, a disconcerting problem is; are taxes paid on actual earned income, or have intangibles been capitalized to arrive at an operating profit, such operating profit being, in fact, a potential profit, and will become earned income, when the goods are sold.

WITH the adoption of the Code, considerable agitation has been stirred up, and a great deal has been said about "Standard Costs," or uniform methods of cost finding. Some authorities have endeavored to force their theories on the soap industry. The objective to be attained by the adoption of such standard cost finding methods, it is argued, will be to average or level off costs among the large and small manufacturers to determine fair practice of competition.

These theories have been advocated for the past fifteen years, and while they are applicable to some industries, for the soap industry as a whole, they are impractical and not workable. However, the principle of standard procedure should be adopted. This principle is the basic fundamental underlying modern methods of cost finding.

If the soap industry, in conjunction with the Code, will agree to and adopt cost systems based on this fundamental principle of standard procedure, then each manufacturer can determine for himself, whether or not

he is really in a competitive position with others. If he cannot compete with other concerns, which figure their costs by standard procedure, he must naturally conclude that his costs are too high. In that case it is up to him to analyze closely his methods of manufacturing, whether or not he is buying his materials at right prices, whether his operating departments are properly balanced, and whether his production is commensurate with his expenditure for labor, overhead and so on. It is not the intention here to outline a standard procedure cost system, but rather to touch upon some of the practical advantages, and the relation to the taxes paid on profits.

INCOME tax time is here. Is your plant cost system one which gives a true picture of your business? Or, are you paying taxes on profits not actually earned? Mr. Muehle, certified public accountant, will be glad to answer questions for readers of SOAP regarding taxes, costs, cost systems, etc. All letters will be forwarded to him for a prompt reply.—The Editors.

SOME years ago, when checking the cost system of quite a large enterprise, the general manager was requested to explain his method. The following schedule was exhibited:

Material	$3.00 per unit
Labor Cost	3.00 per unit
Total Factory Cost	$6.00 per unit
Add 50 per cent	3.00 per unit
Selling Price	$9.00 per unit

When asked, "Where are your overhead, selling expenses and Profits?" His reply was, "It is all included in the 50 per cent." In reply to the further question, "How much of that $3.00 is overhead, how much selling expense, and how much profit?" The answer was, "I never figured that out." You can put it down that this executive was not concerned about taxable profit or operating profit. All he knew was, that if he sold his product at $9.00, he made money. Few modern manufacturers work today in such complete darkness, yet it is a common practice to estimate material, labor and factory over-head and contend that the resulting total is factory cost, and to determine operating profit, compute factory inventory on this basis.

It will be apparent that in the construction of the inventory are included intangibles which do not become a revenue producing factor until the product is sold; and further, in computing operating profit in consequence these intangibles are capitalized. To illustrate, let us assume that the cost of a unit of soap is somewhat as follows:

	Cost
Tangibles—	
Raw Material, Boxes, Labor, Wrappers, etc.	$ .70
Intangibles—	
Labor, Factory overhead, etc.	.30
COST OF UNIT	$1.00

Opinions sometimes differ as to which of the various classes of raw materials are to be treated as part of the prime cost, and which is an expense. Under some conditions, some materials may have to be so handled as an indirect charge, for the reason that it may be impracticable to treat them in any other way. Different operating conditions may sometimes interfere with standard procedure as between productive and non-productive departments. We are here primarily interested in emphatically directing attention to the fact that there are two kinds of profits, one an operating profit, and the other a taxable profit. Under present methods employed by most soap manufacturers, all intangibles are capitalized in inventory, with the result that taxes are paid on operating profits.

To clarify this point, we refer to the illustration. Assuming that a manufacturer has an inventory aggregating $100,000.00 on this basis the intangible incorporated in the inventory would approximate $30,000.00, and this $30,000.00 is the operating profit on which Federal taxes would be paid—then, for the year 1934 these taxes would amount to $4,125.00.

It is quite obvious that manufacturers would not be very much concerned with the intangible feature of their inventories, and the fact that they are paying taxes on operating profits, rather than on taxable profits, if there was any assurance that rates of taxation would not increase. However, such assurance is decidedly lacking today.

Assuming that rates remain as they are for 1934 or are reduced, in this latter event, the manufacturer would have paid taxes on his operating profit at a higher rate, whereas, had he used the taxable profit method disclosed by a standard procedure Cost System, he would receive the benefit of the reduction in rates as pertaining to his inventories, and then pay taxes only on profits actually earned.

LET us draw a brief picture of a cost system installed by a manufacturer, which shows him his profits on an operating basis. The factory is departmentalized in the usual manner,—manufacturing, sales and administrative. The manufacturing department gives him costs, accounts for inventories, etc., the sales department shows the volume of sales, and the amount in dollars and

cents. This is done for twelve months of the year. These monthly reports are not co-ordinated, neither are they brought down at the end of twelve months, and the executive is in possession of 12 monthly reports of indigestible figures. And even if these reports are co-ordinated and the result figured out, the executive would only know what his hypothetical operating profits are, and there yet remains the testing of inventories. Some manufacturers do this daily, that is, take a physical count at an expense that sometimes almost equals the sales expense.

A standard cost system will disclose the facts soap manufacturers have longed for, that is, the real profits made on actual sales. It will give them the information either daily, weekly or monthly, and be dependable to the extent that when actual physical inventories are taken, these inventories will not vary 1½ per cent with the figures carried on the balance sheet.

It is an axiom of accounting, as well as practical business, that profits can only be made on sales. Thus, it is also correspondingly true, that taxes should only be paid on profits made from sales, and not on the intangible values in inventories creating an operating profit, instead of a taxable profit. Of course, if a soap manufacturer chooses to change his method of accounting, or decides to install a new standard cost system, it will necessitate a different method of reporting his income, and to do so, he will have to obtain permission from the taxing authorities.

NEW SOAP CODE INTERPRETATIONS

The following interpretations under the Code of the Soap and Glycerine Industry have been made by the Code Authority and approved by the NRA for publication. Further information may be secured by communicating with R. C. Edlund, executive secretary of the Code Authority, 386 Fourth Avenue, New York. The interpretations herewith are the latest ones to be released, all prior interpretations having been published in previous issues of SOAP as they have been released.

Facts: We employ a number of women to do house-to-house coupon work. This work is very light and requires no experience.

Questions: (a) May we classify and pay such workers as messengers under the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry? (b) is there any classification in the Code under which such workers may be paid less than 40c an hour, or in the southern states less than 35c an hour?

Answers: (a) It is not proper to classify coupon distributors as messengers. (b) As the Code does not contain special wage provision for coupon distributors, such employees must be paid not less than 40c an hour, or in southern states not less than 35c an hour.

Facts: For some years we have employed truck drivers and their helpers under a contract with our local chauffeurs' union. These contracts, which are entered into each year, bind us to fixed hour and wage provisions. Our latest contract, which is really an extension of our previous contract, and which was entered into after the Soap and Glycerine Code became effective, permits us to work such employes 48 hours a week. We are not required by the agreement to limit the hours to an average of 44 per week in a six months' period as provided in the Soap and Glycerine Code.

Question: Are we prohibited by the Soap and Glycerine Code from working our chauffeurs regularly 48 hours per week, as provided by the agreement with their union, without bringing the average down to 44 hours per week over a six months' period?

Answer: Yes. The provisions of the Soap and Glycerine Code must be complied with notwithstanding such contracts.

Question: Must a soap manufacturer reduce the hours an outside salesman may work for him because the salesman also sells other products such as used laundry machinery?

Answer: No. The Code does not limit the number of hours an outside salesman may work.

Facts: We have an employe who regularly splits his time between two occupations which have different hour limits under the Soap and Glycerine Code. During five days of the week this employe works regularly as a handy man around our factory. At the present time he is putting in about 35 hours per week at this occupation. Then on Sunday of each week he works twelve hours as a watchman so that on our present schedule he is regularly putting in around 47 hours per week. For the seven hours he works in excess of forty per week, we pay him time and one-third.

Question: In regulating the total hours this employe may work over a six-months' period, are we required to bring his average down to forty hours per week, or may he work as much as an average of forty hours per week as a handy man and thereafter work as a watchman without any limit on his hours?

Answer: An employe who divides his time between two occupations which are subject to different hourly limitations under the Soap and Glycerine Code, may work a total number of hours not to exceed the maximum permitted for the occupation having the lowest hourly limitation. This means that a handy man, whose hours are limited by the Code to an average within each six months' period of 40 hours per week, may not work as a watchman in excess of this limit.

The bath sponge has caught up with the glorification of the bathroom. The Gulf & West Indies Company of New York announces that it has discovered a way to provide sponges in any of 9 pastel shades—orchid, ruby, aqua green, sapphire, coral, orange, peach, rose, maize. Sponges have always been brownish, but this will be changed by the process on which the company has patents pending, so long as buyers use good soap and do not bathe in strong alkalis, ammonia, alcohol, or water hotter than ordinary flesh can stand. Neither a dye nor a sponge will stand everything. *Business Week*, Jan. 5th.

A concern in Paris, France, is interested in an agency for American scouring and cleaning soaps. Interested parties may secure further details from the U. S. Bureau of Foreign and Domestic Commerce, Washington, mentioning inquiry number 8092.

A. Maschmeijer, Jr., New York, perfuming materials, is now being represented in Mexico by Ramon S. Alcaraz, Av. Baja California 29, Mexico City. Mr. Alcaraz is also the sales representative in Mexico for the Guaranty Washing Co., New York.

Patents for Soap Articles

By JOSEPH ROSSMAN, Ph.D.

MANY expedients have been suggested which will permit a cake of soap to float. The first recorded, patent 196,766, Nov. 6, 1877 to A. Quentin used a core of cork. Transparent soaps have been provided with floats carrying advertising matter. A thin coating of celluloid is applied over the advertising matter to protect it. (Patent 676,865, June 25, 1901 to W. Berry). A shell of waxed paper is used as a core in a cake of soap in patent 1,615,244, Jan. 25, 1927 to J. Stern.

According to patent 1,617,466, Feb. 15, 1927 to O. Tronstad, a hollow aluminum ball is attached to a cake of soap as a float. The ball also serves as a handle to grasp the soap. Patent 648,247, Apr. 24, 1900 to M. E. Dunne provides a cake of soap with a hollow core of celluloid made in two sections. Advertising matter is inserted in this chamber. When the soap is used up the core can be taken apart and the advertising contents removed.

Soap has been made to float by incorporating air. This has been done in such a manner that the soap appears to be solid. A recent patent 1,780,330, Nov. 4, 1930 to R. S. Blair describes a method which consists in introducing air into a mass of soap in physically soft condition to form therein a mass of air cells of such substantial and readily perceptible size as largely to increase the volume of the soap and comparable to those of a rubber sponge, permitting the soap to harden, and forming its surface into a smooth shell.

Compressed air is forced into a mass of soap before it has hardened. After it attains a spongy condition it is permitted to set. Cakes of soap are then cut out and placed in dies. These dies may be made to form any suitable impression in the surface of the soap cake and are heated by electric or other suitable means. The sponge-like cake of soap having been placed between the warm dies, the surface thereof is softened by the heat, and upon the dies being urged together the softened soap about the porous openings flows together, substantially sealing the openings and forming a smooth, even surface. The cake has the exterior appearance of a solid cake of soap, the outer surface being smooth and even, but the interior thereof is cellular and sponge-like.

Pockets, cavities and holes have been provided in cakes of soap for specific purposes. Patent 180,390, July 25, 1876 to S. Strunz, for example, forms a pocket in a cake of soap for holding a prize or gift package, flush with the surfaces of the cake.

Air holes have been provided for ventilating the cake of soap in order to accelerate its hardening and drying. (Patent 235,730, Dec. 21, 1880 to H. J. Borie).

THIS is the third of a series of articles reviewing United States patents covering the physical form of soap articles by Dr. Rossman, chemist, member of the bar, and patent examiner in the United States Patent Office.

Intersecting channels in the cake of soap have also been suggested (Patent 282,145, July 31, 1883 to G. A. Wrisley).

Cakes of soap have been provided with a cavity in one face in which waste pieces of old soap are to be placed so as to avoid wastage. (Patent 1,495,978, June 3, 1924 to A. C. Anderson).

When the cake of soap is almost used up it is well known that it has a tendency to crumble and break. Inventors have therefore proposed to reinforce the cake by various means. Patent 108,584, Oct. 25, 1870 to W. F. George, for example, uses a corrugated or perforated piece of wood. This insert will strengthen the last bit of soap and thus permit it to be entirely used.

A recent patent 1,707,334, Apr. 2, 1929 to E. Unfried uses a flat filler of paper, wood or celluloid for a cake of soap, having two shorter and two longer sides, the thickness of the filler gradually diminishing from the periphery towards the center, the two longer sides gradually curving inwardly from the shorter sides towards the center. The filler is shaped to conform to the general form of the cake of soap. Soap has been reinforced with a sheet of paper carrying advertising matter. The sheet may carry a pocket to receive a coupon. (Patent 818,652, Apr. 24, 1906 to T. M. Anderson).

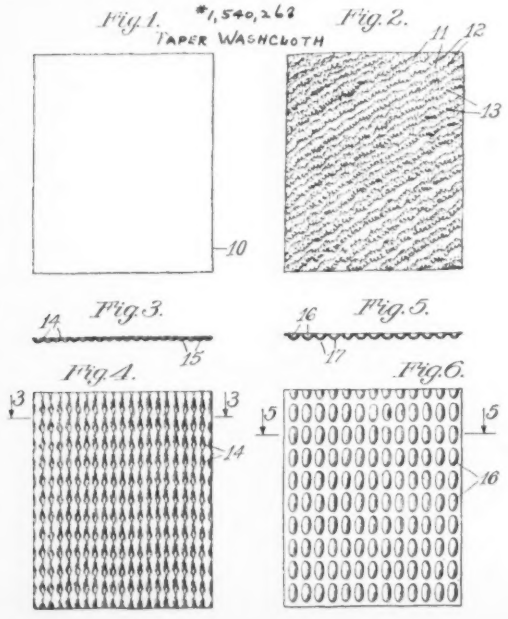
It is a well-known fact that when a cake of soap is used in a shaving-cup the cake wears off in a concave form, thereby necessitating the throwing away of what is left around the edge of the cup or in a great deal of trouble in completely using up the soap remnants. Moreover, when the cake forms with a concave hollow in the center whatever dirt, etc. there is in the cup will naturally be drawn by the action of the brush into the center hollow. This produces a tendency to an unsanitary condition of affairs. Patent 763,463, June 28, 1904 to G. L. Cataldo provides a wear-resisting device which is inserted into the upper surface of the soap exposed to the wearing action of the brush, the device being harder than the soap generally and insoluble in the liquids employed in using the soap.

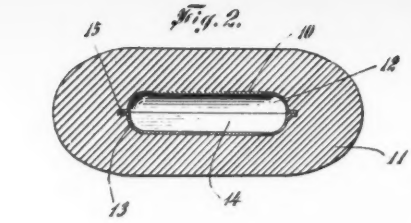
A combined tag and rest for cakes of soap is described in patent 857,570, June 25, 1907 to L. C. Allen. When the tag rest is embedded in a cake of soap, the exposed surface while higher than the contiguous sur-

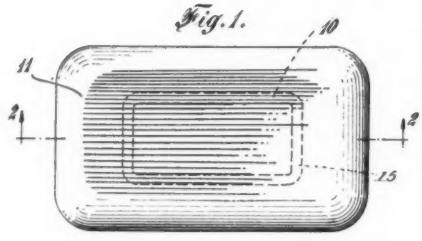
face of the bar, presents a smooth edge to the hand, preventing any abrasion of the skin. It is not removed from the bar when in use, but is adapted to be used as a rest. When the bar is placed tag side down, it will be seen that this rest will hold the soap up out of contact with the surface on which it is laid, and hence prevent the soap from becoming soft and slimy and thus avoids the wasting attendant upon the use of the ordinary bar of soap, from contact with the water upon the place upon which it is laid.

Patent 702,531, June 17, 1902 to W. R. Bowen provides a guard-plate by means of which a cake of soap is supported and held a slight distance away from the surface upon which the guard-plate rests, thereby maintaining the soap free from such foreign matter as it otherwise would pick up, while at the same time the guard-plate acts as a "drain", so to speak, for the soap after use, the object of the invention being to add to the attractiveness of the soap by having one side of the cake of soap provided with a metallic or composition plate, which may be ornamented in any suitable manner.

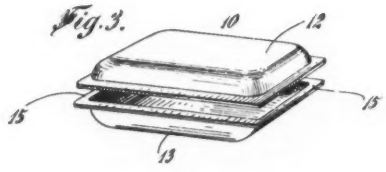
Soap has been prepared in the form of sheets for toilet uses so that only a small quantity is used at one time. This mode of supplying soap is hygienic as well as economical. The object of patent 261,897, Aug. 1, 1882 to J. Bankmann, for example, is to furnish soap in the form of thin perforated sheets or tablets so that a single piece may be torn off for each washing of the hands or face. It is preferred to make each sheet about three inches long and two inches broad and perforated crosswise, so as to form four tablets. The sheet has then about the thickness and portability of postage stamps. About one dozen of such sheets may be arranged in a packet in the form of a pocketbook. The packet will then contain the material for forty-eight separate washings. The soap-sheets are manufactured by first planing off thin shavings from a block







FLOATING SOAP
#1,615,244



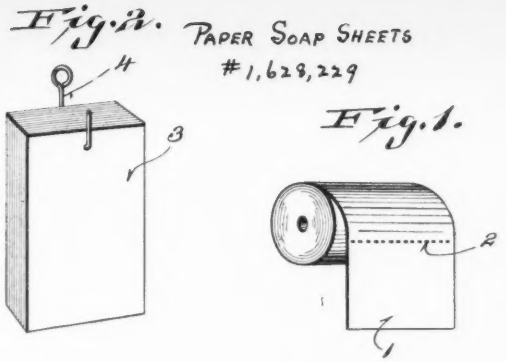
of soap, then smoothing these shavings by means of a roller, and, finally, perforating them so that each shaving or sheet may be easily divided into correspondingly small pieces. The soap may, if desired, be made to contain carbolic acid, tar, or other medicinal materials.

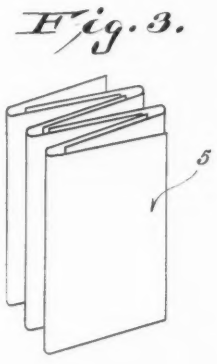
According to patent 259,268, June 6, 1882 to H. Buczkowski sheets of paper are coated with a soap solution containing a disinfectant. The treated paper may be put up in rolls, leaflets or books.

Patent 545,614, Sept. 3, 1895 to W. H. Roach coats sheets of paper with soap. The sheets are then oiled and passed between heated rollers to smooth them. They are then superimposed into packets.

In order to have the paper carry more soap patent 1,125,408, Jan. 19, 1915 to J. M. Sibbit uses perforated paper sheets. The inventor says: "I have found that the fabric, as usually employed, will not absorb a sufficient quantity of soap for ordinary purposes, or if a plurality of layers of soap are deposited upon the fabric, each layer being allowed to dry before the next succeeding layer is applied, the sheet will readily crack and the layers of soap, so deposited thereon, will crumble off and be wasted."

In patent 1,628,229, May 10, 1927 to Christman a description is given of a package consisting of a series of separate interfolded sheets of paper impregnated with soap, with the folded portion of one sheet enclosing the ends of the adjacent sheet to thereby pro-





tect successive sheets, whereby one sheet may be removed without moistening the next sheet, and will cause a portion of the next sheet to assume a freely accessible position.

According to patent 1,631,757, June 7, 1927 to Peck, thin vegetable parchment paper is coated with soap. Advertisements may be printed on the paper. Abrasive material is incorporated with the soap.

Paper washcloths, according to patent 1,540,268, June 2, 1925 to W. A. Lorenz are made by crinkling, bending or embossing heavy, tough paper not readily disintegrable in water, to render it flexible and providing it with scrubbing riffles, and coating it with a solution of soap and then drying. The riffles are advantageous, inasmuch as a sheet of paper to which soap has been applied, if smooth, and especially if it is tough and stiff, is apt to slip over the hands when wet, and not to clean the hands.

Another inventor states that "considerable inconvenience is often experienced by the traveling public and in offices, stores, and the like through the failure to have soap convenient for use when needed. It is well known, that some public conveniences supply soap, but this soap is usually of an inferior grade and of such nature that particular people do not care to use it and again it is more or less unsanitary in that it is used by several persons." An object of the present invention is to provide soap in book leaf form, in which leaves are carried by a cover or binder, in the form of a pocket memorandum book so that they can be conveniently carried about and arranged so that a leaf, or portion of a leaf may be torn from the book when needed, and it is also an object of this invention to provide certain of the leaves of the book of carbolic or other antiseptic soap or analogous material for use in case of accident or when necessary. (Patent 1,648,778, Nov. 8, 1927 to D. W. Mitchell).

A recent patent 1,723,560, Aug. 6, 1929 to T. Kuroda describes soap leaf consisting of paper coated with soap. The soap leaf is provided with perforations so that it will not stick to the hands when used.

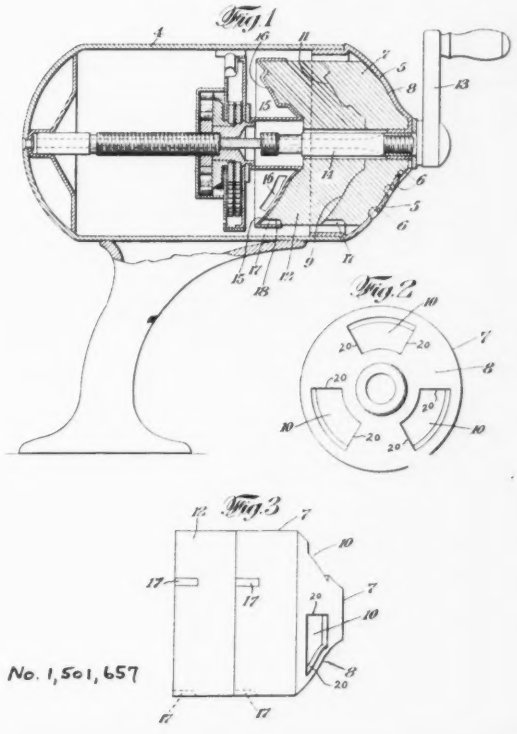
A sponge pad is described in patent 1,786,513, Dec. 30, 1930 to R. C. Zuckerman comprising a top sheet of absorbent fabric, a plurality of absorbent paper sheets under the top sheet, a bottom sheet of oiled paper, and a soluble antiseptic soap solution with which the fabric sheet is impregnated.

Soap has been made into special shapes suitable for specific purposes. Thus patent 268,321, Nov. 28, 1882 to A. van Haagen makes a cake of soap flat, or nearly so, at the top and bottom, and having rounded edges indented or grooved so that it may be readily gripped.

In order to prevent the cake of soap from slipping out of the hand during use patent 1,587,279, June 1, 1926 to C. L. Burgher makes a hand-cake of soap having a recess in its mid-portion of such depth as to leave a relatively thin web of soap surrounded by a shoulder of soap, thus forming a hold for the hand. In patent 261,156, July 18, 1882 to W. J. Houston soap is made in the form of a horse shoe. The edges of the cake are beveled.

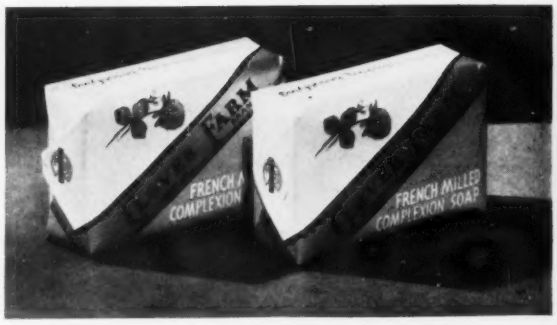
Cakes of soap have also been given peculiar forms so that they can be utilized in dispensing devices for

(*Turn to Page* 53)



New Products

As part of redesigning and modernizing the packages for its entire line, the Clover Farm Stores Corporation of Cleveland has changed a number of items among its soap products. On the right, the French Milled Complexion Soap has a new wrapper of orchid, cream and gold. Above is a marked simplification of design plus the use of vivid colors for the laundry soap line. Wrappers are by McDonald Printing of Norwood, Ohio, and the cartons by Central Carton of Cincinnati. The soaps are private brands manufactured for Clover Farms by Procter & Gamble.



For Shu-Brite Cleaner, new containers have been adopted by the Allied Products Company of Chattanooga, Tenn. The cleanser in four different colors is now being packaged in a standard stock bottle by Owens-Illinois with metal cap.

and Packages

The two new brushless shave creams of Colgate-Palmolive-Peet, announced late in 1934, are now being marketed nationally. In a selected sales test, the company states 78 per cent of original buyers repurchased. Retails in 25c and 40c sizes.

◆

Something new in a low-priced liquid soap dispenser which is being marketed to the jobbing trade by the Clifton Chemical Company of New York. Fills from top. Moulded plastic cap. Chromium plated bracket and base. Is called the Moderne Dispenser.

A unique dispensing top for a spotting fluid container. The cap is opened by a quarter turn permitting the liquid to seep onto the cleaning pad, while reversing the turn seals the can again. It is a double moulded cap of Durez manufactured by Plastic Merchandisers, Inc., New York, and it fits on any standard can.

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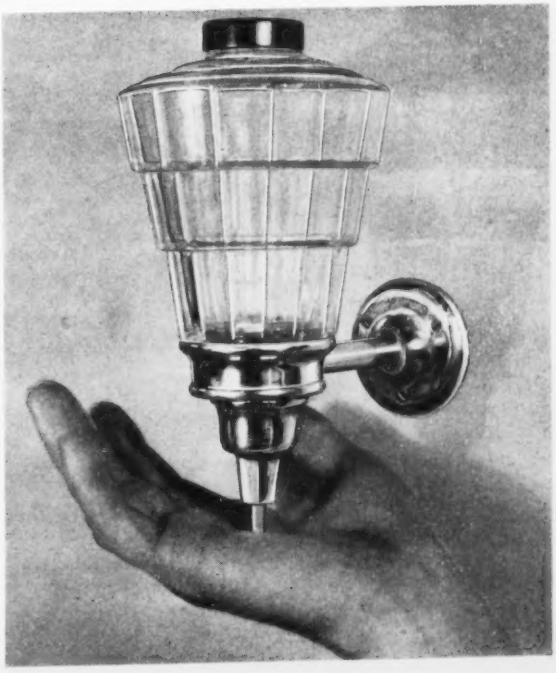

SODIUM SESQUISILICATE
Its Detergent Applications

By C. H. JEGLUM
Philadelphia Quartz Co.

SODIUM sesquisilicate* is the newest alkali to be presented for sale. The reader who hears this name for the first time will connect it with sodium metasilicate and perhaps wonder if sesquisilicate is not a substitute or imitation. It is neither, but it is a first cousin of this now well known detergent.

Nearly five years ago sodium metasilicate was introduced to the American market as a new alkaline detergent. To the chemist it had long been known as a laboratory curiosity without commercial value because of its gummy, lumpy nature. This new product was so different that it was hardly recognizable as the same chemical. It was white, free-flowing, quickly soluble; a powder, convenient to use and easy to handle. The new process was soon followed by another from the same laboratory, whereby the material was crystallized out like sugar from a mother liquor. This metasilicate† has been widely adopted in industry as a heavy duty detergent. In many cases it has been used by itself but sometimes it has been desirable to combine it with soap, rosin, caustic soda, etc.

Studies showed the metasilicate to have outstanding advantages as a cleaner. It had a remarkable ability to wet oily surfaces. Its free-rinsing characteristics were very striking when compared with other alkalies. It did not attack metals nearly as quickly as materials of equivalent pH (due to the buffering action of the silica which it contained) and it was able to maintain a high pH over a wide range of concentration. These qualities and others have been discussed in numerous publications (See: Sodium Metasilicate—Its Detergent Applications, by T. K. Cleveland, SOAP, November, 1934).

While metasilicate has supplanted other alkalies in many cases, there have been times where its alkali content was not qiute sufficient to do the work intended. In such cases it was customary to add caustic soda. Caustic, however, is difficult, even dangerous, to handle. It was desirable to avoid its use if possible. Accordingly laboratory research was begun which eventually resulted in the product known as sodium sesquisilicate.

Sodium sesquisilicate contains 36.89 per cent Na_2O, 23.83 per cent SiO_2 and 37.27 per cent water which, when calculated to a molecular basis, allows us to write the formula as $3Na_2O.2SiO_2.11H_2O$. It will be seen that there is half again as many molecules of soda as silica, hence the name "sesqui." The formula might also be written as $Na_3HSiO_4.5H_2O$ and called the pentahydrate

Crystals of sodium sesquisilicate as seen through the microscope, magnified thirty times.

of trisodium orthosilicate. However, there is insufficient knowledge of its constitution to allow us to state with certainty which is correct and though some day it may be necessary to christen officially the new chemical with this formidable title, for the present we prefer to use the simpler title of sesquisilicate.

Users of metasilicate will recall that it contains 29 per cent Na_2O, 29 per cent SiO_2 and 42 per cent water. It will at once be seen that sesquisilicate contains almost 8 per cent more Na_2O and 5 per cent less SiO_2. Thus pound for pound, sequisilicate supplies a larger amount of alkali, and because it contains relatively less silica, the pH value is also higher. A comparison on a basis of equal concentration shows the following:

Concentration by Weight	*Meta-silicate pH*	*Sesqui-silicate pH*	*Caustic Soda pH*
0.1%	11.3	11.6	11.9
0.5	12.1	12.3	12.7
1.0	12.3	12.6	13.1
2.0	12.7	13.0	13.3
5.0	13.1	13.3	13.8

On a basis of equal Na_2O content the comparison is equally striking:

Concentration $\%Na_2O$	*Meta-silicate pH*	*Sesqui-silicate pH*	*Caustic Soda pH*
0.05	11.6	11.8	12.0
0.1	11.9	12.1	12.2
0.5	12.6	12.8	12.9
1.0	12.9	13.1	13.2

It will be seen that sesquisilicate very nicely fills the

(*Turn to Page* 63)

*U. S. Patent 1,948,730.
†U. S. Patent 1,898,707.

P & G SET ASIDE OIL PROFITS

A material and products price equalization fund of $1,965,000 has been set aside by Procter & Gamble Co. from the net earnings of the company for the fourth quarter of 1934. This deduction from net profits, which amounts to 31 cents per common share, is in line with the conservative bookkeeping policy of the company. R. R. Deupree, president, stated that the $1,965,000 was set aside in recognition of the fact that inventory profits due to rising prices usually are succeeded by inventory losses. Beyond that statement the company did not explain its "equalization fund," although observers believe the money represents in part the profits accruing from huge cottonseed oil inventories. Procter & Gamble are believed to have a six-months supply of cottonseed oil, all or most of which is reliably reported to have been acquired at or below 7 cents a pound. The current price is over 10 cents.

FIGHT LOWER STEARIC ACID TARIFF

Formal objection to any reciprocal trade agreement with the Netherlands for a lower tariff on imports of stearic acid was made in Washington on Feb. 4 by the stearic acid industry of the United States when George H. Rasch appeared before the Committee for Reciprocity Information. Stearic is being sent from the Netherlands to the United States at prices below those established among European manufacturers which formerly were large buyers of American red oil, the fact finding body was told.

Attention was directed to the fact that the Treasury Department took cognizance of the situation in 1933 and entered a dumping order against the Netherlands. "In spite of this situation", said the complaint, "stearic acid was named before Congress by a representative of the State Department as a product suitable for negotiating a lower tariff with the Netherlands for the purpose of increasing exports."

The industry's representative introduced statistics in evidence to show that in the past, when tariffs were increased, exports increased and when tariffs were lowered, exports also went down.

If existing processing taxes on oils and fats are to be continued, it will be necessary to have a compensating tax on finished products, said Rasch, who presented the following fact: 120,000,000 pounds of animal tallow and greases originating on American farms were bought by members of the industry in 1929, and in 1933 there were 80,000,000 pounds consumed by the industry.

Technical information of value to soap manufacturers is contained in bulletin No. 3, "Solvents and Plasticizers" which has been issued by the fine chemical division of E. I. du Pont de Nemours & Company, Wilmington. Four solvents are referred to as being of particular interest for the formulation of soaps and special detergents for various purposes in the textile and other fields.

ORIGINATOR OF PALMOLIVE SOAP

Joseph Abraham, who was reported killed by an automobile in front of his home at Mount Clements, Mich., in the January issue of SOAP, was the actual originator about 30 years ago of Palmolive Soap, according to Anthony Huber, president of the Huber Machine Co., who has been close to the soap industry for the past forty years as a supplier of soap machinery. Mr. Abraham, who at the time of his death was connected with Frederick Stearns & Co., Detroit, was prior to 1907, a soap maker with Johnson Brothers of Milwaukee, and it was there that he began the manufacture of Palmolive. The Johnson firm later became the Palmolive Company, and subsequently Palmolive-Peet, and Colgate-Palmolive-Peet. Neither the Johnsons nor Abraham were the chief beneficiaries of the later world-wide popularity of Palmolive.

Mr. Abraham was also the originator of an excellent type of glycerine evaporator, according to Mr. Huber. This equipment was marketed by an engineering corporation in which the Johnsons were also interested. But, says Mr. Huber, soap makers of those days did not take kindly to innovations so that the equipment did not meet with any great financial success. Mr. Abraham, like the late John T. Stanley, was a native of England, and like Mr. Stanley, contributed much to the American soap industry in its earlier days.

UNIFORM HOURS UNFAIR, SAYS EDLUND

Because of a wide variation in conditions, no uniform hours or wages can be laid down to cover all industries without grave and possibly disastrous consequences to some industries, according to Roscoe C. Edlund, speaking in behalf of the Consumers' Goods Industries Committee before the National Industrial Recovery Board's recent hearing in Washington on labor provisons of various codes. He warned against revision of hours and wages of codes by executive order without the consent of the industries involved, and also against the adoption of a universal thirty-hour week or any other blanket labor proposal as a menace which would dam up the channels from which wages flow. He also stated that to try to stabilize wages without stabilizing the industries from which these wages come, would be futile. He urged a continuation of present codes for the protection which they afford both industry and those men who are employed in industry. Mr. Edlund is manager of the Association of American Soap and Glycerine Producers and executive secretary of the soap and glycerine code authority.

Every important phase of packaging, packing and shipping will be covered by speakers at the four-day conferences and clinics to be held in conjunction with the Fifth Packaging Exposition, Palmer House, Chicago, March 5 to 8, inclusive, according to a preliminary summary of the program released by Alvin E. Dodd, managing director of the American Management Association, sponsors of the Packaging Exposition.

CHICAGO TRADE NOTES

THE January 31st meeting of the Chicago Drug and Chemical Association at the Chicago Athletic Association was the largest meeting in the organization's history. Over 130 members attended.

At the January 15th meeting of the Chicago Perfumery, Soap and Extract Association at the Hamilton Club, the time was given over to a discussion of the non-beverage alcohol tax. A resolution was passed that the association protest against the present tax of $3.80 per proof gallon, as is provided for in the Liquor Taxing Act of 1934. J. H. Helfrich, the new president of the association, announced the following as committee chairmen for 1935: Executive Committee, J. H. Helfrich; Legislative Committee, George Wrisley; Membership Committee, Dudley Lum; Publicity Committee, J. A. A. Scott; Entertainment Committee, C. A. Hammond and M. B. Vance, Co-Chairmen; Golf Committee, Walter Jelly; Bowling Committee, Paul Pettit.

Davidson Commission Company, Chicago, has taken additional space adjoining their present offices at 327 C. LaSalle Street.

International Exterminator Company, Chicago, has moved into new quarters at 1128 N. Wells Street.

H. D. Hudson Mfg. Co., Chicago, will announce shortly a new development in their line of sprayers. The new feature, which will be embodied in all 1935 production, is said to provide easier operation and much finer atomization of insecticides.

U. S. Bottlers Machinery Co., Chicago, are now manufacturing a new type capping machine. It is a fully automatic machine with built-in micromatic control and is said by the maker to give a production capacity on a two spindle machine heretofore only obtained on larger and more expensive rotary machines.

The following manufacturers of cleaners, polishes and waxes were represented with displays at the 8th annual National House Furnishing Exhibit, January 6th to 12th, at the Stevens Hotel, Chicago. A. S. Boyle Co., Betts Products Co., Franco Laboratories, S. C. Johnson & Son, Midway Chemical Co., National Solvent Corp., O'Cedar Corp., Phoenix Oil Co., Rubon Woodfinishing & Products Co., Rusko Products Co., Vapoo Products Co., Wilbert Products Co. and Wizard, Inc. Manufacturers of moth preparations and insecticides represented were Beh & Co., Ralph Gretsch & Co., W. B. McCloud & Co., Lewis Laboratories, O'Cedar Corp., Midway Chemical Co., Vapoo Products Co. and Wizard, Inc.

P & G LEADS SOAP ADVERTISERS

Procter & Gamble Co. was the leading national magazine advertiser in the soap and toilet preparations field in 1934, according to a survey just completed by the Publishers' Information Bureau. Its expenditures on magazine advertising totaled $2,947,294, as compared with $3,254,289 in the previous year. There were three other concerns in this field who spent over a million dollars, these being: Lever Bros. Co., $2,257,615 as against $2,705,743 in 1933; Lambert Pharmacal Co., $1,969,691 as against $2,139,879 in 1933; and Bristol Myers Co., $1,147,908 as against $1,080,594 in 1933. Other advertisers whose figures were studied in the survey included:

	1934 *Magazines*	1933 *Magazines*
Bon Ami Co.	$571,082	$550,648
Clorox Chemical	137,416	39,359
Drackett Chemical	213,025	192,825
Fels & Co.	298,014	361,220
Gold Dust Corp.	100,588	8,033
Jergens, Andrew	154,400	135,750
Johnson & Johnson	484,791	250,017
Johnson, S. C. & Son	271,560	367,253
Kolynos	21,401	93,813
Lehn & Fink	502,266	843,785
Mennen Co.	148,904	146,425
Pepsodent Co.	924,021	890,447
Simoniz Mfg. Co.	228,689	187,609
S. O. S. Co., The	129,216	24,250
Squibb E. R. & Son	755,372	670,616
Swift & Co.	936,748	659,620
Watkins, R. L. Co.	24,555	28,450
Western Co.	199,744	354,425
Williams, J. B. Co.	231,555	232,266
Woodbury, John H., Inc.	575,338	581,894
Yardley & Co.	159,480	216,900
Zonite Products	309,175	218,906

Repeal of the processing tax on coconut oil is proposed in House Bill No. 1427, introduced by Representative John F. Dockweiler of California. The 1934 revenue act placed a processing tax of 3 cents per pound on all coconut oil and an additional tax of 2 cents per pound on coconut oil imported from elsewhere than the Philippine Islands.

The index of employment in the soap industry registered 99.6 for December, 1934, a drop of 4.8% from the November figure, although 7% above the corresponding figure for December, 1933. The payroll index reading for December, 1934, was 90.7, a drop of 2% from November, and an increase of 17½% from December, 1933.

The annual business meeting of the Oil Trades Association of New York will be held at the Waldorf-Astoria Hotel, March 12, at which time officers and directors will be elected for the coming year. The quarterly meeting and dinner of the association was held at the Waldorf, January 29, with 350 members and guests present.

NEVER BEFORE HAVE

THESE RARE TYROLEAN PINE OILS

BEEN AVAILABLE IN AMERICA

Silver Pine Needle Oil from Abies Alba

One of the most expensive of all Pine Needle Oils, but outstanding in its perfume and odor value. A comparatively new oil which is becoming more popular every day, especially in England.

Templin Oil

This too is distilled from Abies Alba but only from the cones not the needles. The Tyrol produces a considerable quantity of this oil

Oil Pinus Pumilionis

This is the finest and purest oil we have ever been able to market.

Oil Pinus Sylvestris

A highly important Pine Needle Oil. Only the Tyrolean Pinus Sylvestris should be used in high grade mixtures. Those produced in Siberia and Eastern Asia do not compare in quality

THE demand for Pine Oils, both cone and needle, has been constantly increasing in the past few years. Their refreshing and woodsy tang justifies the recognition they are getting for cosmetics, soaps, bath preparations and other similar products.

We have long felt that the importance of these oils demanded better qualities than have been available here. So we recently completed arrangements to have manufactured for us in the Austrian Tyrol some Cone and Needle Oils from several different varieties of Pine. These oils are now available through us in a most exquisite quality.

We believe their unusual and fine fragrance holds a treat in store for those who have yet to see them. Most surprisingly they cost no more than the ordinary qualities.

"Fragrance Creates Sales Appeal"

FRITZSCHE Brothers, inc.

164 SO. CENTRAL AVENUE, LOS ANGELES, CAL.

78-84 BEEKMAN STREET
NEW YORK, N. Y.
118 WEST OHIO ST. CHICAGO, ILL.

Proprietors of PARFUMERIES de SEILLANS, Seillans, France
FRITZSCHE BROTHERS, of Canada, Ltd., 77-79 Jarvis St., Toronto, Canada

PERSONAL AND IMPERSONAL

Joseph Grober was elected president and general manager of Albany Soap Corp., Albany, N. Y., at the annual meeting of the company last month. Other officers include: Wm. C. Schopman, 1st vice-president; Harold Hallenbeck, 2nd vice-president; Wm. H. Geier, assistant manager; John H. Rea, treasurer; and Harry J. Geier, secretary.

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John H. Woodbury, Inc., has filed action in Federal court, alleging infringements of the Woodbury name on toilet articles, which they claim to have used since 1890. Defendants are William A. Woodbury Corp., William A. Woodbury Sales Co., Inc., Arkovy Cosmetic Corp., formerly known as William A. Woodbury Co., Inc., Dermay Perfumers, Inc., J. T. Robertson Co., Inc., and Regal Laboratories, Inc.

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Control of the fourth largest soap manufacturing company in Canada, that of Joseph Barsalou & Co., Limited, Montreal, has passed into the hands of Procter & Gamble Company of Canada, Ltd. It is understood that the purchase price of the plant on Delorimier Avenue, Montreal, which employs over 50 hands, was between $400,000 and $500,000. The Barsalou company was founded in 1874.

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Dowd's New England Merchandisers, Boston, have been named sales representatives in New England for Billy B. Van's Pine Tree Soap and other products of the Newport Company.

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J. F. Kohl of the Huntington Laboratories, Huntington, Ind., has outlined in two articles in recent issues of American Dry Cleaner the function of soap in the dry cleaning process under the titles, "The Why and Wherefore of Soap."

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Colgate-Palmolive-Peet Company inaugurated a new radio show on January 28, taking the place of the "Colgate House Party" broadcasts. The new show went on the air unnamed, and its title will be selected in a contest. A prize of $1,000 is offered to the person picking the winning name. Benton & Bowles, New York advertising agents, handle the Colgate account.

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Nacto Cleaner Corporation, New York City, has been ordered by the Federal Trade Commission, to discontinue using on labels or in advertising in periodicals or by radio that "Nacto Fabric Cleaner" will not injure color or fabric, unless and until the cleaner can be used on any fabric of any color without injury.

William H. Disher, vice-president and treasurer of Olds Soap & Chemical Co., Indianapolis, died last month at the age of 57.

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William R. Francis, chief executive and organizer of Vegetal Specialty Co., soaps, New York, died of pneumonia in Orange, N. J., last month. Mr. Francis was sixty-seven years old and had operated the Vegetal Specialty Co. for almost twenty-five years.

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H. Bronnley & Co., British soap firm, has had a reduction in its capital confirmed by the British High Court from £120,000 ($600,000) to £95,840 ($479,000), by returning capital in excess of the wants of the company. The company manufactures toilet soaps. It has over £20,000 on deposit and investments of over £20,000 also. It is returning £24,160 which is in excess of its wants.

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The Sanitate Corporation, Baltimore, makers of "Sanitate" cleaner, has appointed Emery Advertising Company, of Baltimore, as advertising counsel. Newspapers will be used.

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Pawley Chemical Co., Cohoes, N. Y., is introducing a new polishing and cleaning material for enamel and porcelain under the name "Gap".

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A new soap plant in Greensboro, N. C., has been placed in operation by Kelly Universal Products, Inc., of which J. I. Kelly is president.

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The National Soap Sculpture Committee has announced its eleventh annual soap sculpture competition for $2,500 in prizes offered by Procter & Gamble Co. As in previous contests there will be four classes: professional, advanced amateur, senior and junior. Nearly four thousand soap carvings were entered in last year's competition. This year's contest will close on May 1, and all sculptures submitted will be on display at Rockefeller Center, New York, during the month of June.

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E. L. Thomas has become associated with the New York office of William M. Ware & Co., oil and fat brokers of Boston, and is now located in the Produce Exchange Building, New York. Mr. Thomas has been connected with the oil and fat industry for the past twenty years being identified with the Consolidated Rendering Co., Boston, the Foodstuffs Division of the Department of Commerce, Washington, and the United Africa Co., New York.

The right SILICATES *save money*

YOU are sure of smooth, uninterrupted production of every one of your various soaps and cleansers when your silicate is a P. Q. product. P. Q. has made silicates of soda continuously since Lincoln was in the White House.

In the P. Q. selection of 33 silicates are grades of low alkalinity and grades of high alkalinity, powders and liquids. You will find the right one that fits each of your formulae, the old and proved ones, or those still in the experimental laboratory.

A silicate that is unsuited to your needs wastes your time and increases costs. Look over the grades listed in our bulletin "Silicates of Soda" and consult us without obligation about the right silicates for your detergents.

PHILADELPHIA QUARTZ COMPANY

General Offices and Laboratory: 125 S. Third St., Philadelphia, Pa.
Chicago Sales Office: Engineering Bldg. Distributors in 60 cities.
Sold in Canada by National Silicates Ltd., Toronto, Ontario.

P.Q. SILICATES OF SODA

Billy B. Van, president of Pine Tree Products Co., Newport, N. H., reports that the Southwestern Drug Corp., Dallas, has lined up 3300 drug stores that are now selling "Billy B. Van's Pine Tree Soap" under the supervision of James M. Penland.

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A new liquid fabric cleaner is being introduced by E. I. du Pont de Nemours & Co. under the name "Tri-Clene".

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The late William Winwood Gossage, head of William Gossage & Sons, English soap and chemical manufacturers, left an estate of a gross value of £245.434 ($1.227.170).

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Lockwood Brackett Co., Boston, prominent importers of castile soap, are operating under a temporary receivership pending reorganization. T. R. Lockwood is acting as general manager for the receivers. The receivership action was undertaken voluntarily by the company with the cooperation of creditors to remedy an internal situation. Mr. Lockwood states that the company continues to operate at a profit under the receivership which it is believed will be terminated shortly.

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Hunnewell Soap Co., Cincinnati, has opened a branch at Detroit in charge of Jac Carpenter who has been with the firm for a number of years, according to an announcement by Leslie Webb, president of the company.

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Charles C. Smith & Sons, Cleveland, a new company, are manufacturing dispensers for soaps and allied products.

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Concerns exempted from the wage and hour provisions of the soap and glycerine code will hereafter be required to file their production and sales figures with the code authority only once a year, instead of once a month, under an NRA decision. The group comprises the W. D. Carpenter Company, Syracuse; Capstone Manufacturing Company, Newark; C. C. Buchanan Chemical Company, Cincinnati; Enterprise Oil Company, Buffalo; Eaton Clark Company, Detroit; Hartman-Leddon Company, Philadelphia; and a recent addition, Standard Oil Co. of Ohio, Cleveland.

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W. G. Wells has been placed in charge of soap sales for Lever Bros. Co. in the Omaha district. He is being transferred from a similar position in the Milwaukee district.

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Cincinnati Soap Co. is making a bargain offer in connection with sale of its "Pal" soap. Grocers are empowered to offer 50c worth of free groceries to any buyer who persuades five of his friends to try "Pal."

Fitzpatrick Bros., Chicago, makers of "Kitchen Klenzer", aided in the recent celebration of President Roosevelt's birthday in Chicago by donating 15,000 "Kitchen Klenzer" cans to be used as banks during the charity drive which was a feature of the birthday celebration.

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W. R. Veale and Manning O'Connor, executives of Colgate-Palmolive-Peet Co., have been advanced to more important positions in the company, it has just been

Manning O'Connor

W. R. Veale

announced by E. H. Little, vice-president in charge of sales. Mr. Veale, formerly manager of the toilet article department, becomes manager of the soap department. The position he vacates is taken over by Mr. O'Connor, who has been serving since 1933 as sales manager of the toilet article department. Mr. Veale has been with the company since 1922. In 1928 he went to Buenos Aires as general manager of Colgate-Palmolive-Peet Co., Ltd., of Argentina, returning in 1933. Since his return he has been instrumental in working out, with the assistance of Mr. O'Connor, the profit stabilization plan which has been a feature of the company's recent sales policy. The plan will receive even greater emphasis during 1935.

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Alfred F. Burrows, 59 years old, prominent for many years in the soap industry, died February 5 at his home in Chicago from a heart ailment. Mr. Burrows was born in Chicago. In 1889 he went to work for the James S. Kirk Soap Manufacturing Company in which he became an executive. He left the company in 1920 to join the Graham Brothers Soap Company, which he headed until 1928, when he organized his own firm. During the war he served with the United States shipping board. A daughter, Mrs. William Stetson Boal, survives him.

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A new 1935 price book, containing prices on more than 200 "Colgate" and "Palmolive" items is now available to all customers of Colgate-Palmolive-Peet Company. It gives information on the company's mail order service policy and also illustrates the various cuts available, without cost, to dealers.

RECORD OF TRADE-MARKS

The following trade-marks were published in the January issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

TRADE MARKS FILED

CAMEO—This on oval-shaped reverse plate describing shoe polish. Filed by Cosmola Chemical Co., Cleveland, Oct. 19, 1934. Claims use since Sept. 28, 1932.

SHAV-AMI—This in type resembling script describing brushless shaving cream. Filed by McKesson & Robbins, Inc., Bridgeport, Conn., Nov. 9, 1934. Claims use since May 16, 1932.

R 7—This on circular reverse plate describing tooth powder. Filed by Dental Products Laboratories, Springfield, Mass., Oct. 11, 1934. Claims use since Oct. 1, 1934.

CEDEX—This in solid letters describing plastic moth-repellant wall coating. Filed by Fletcher Hall Corp., New York, Oct. 24, 1934. Claims use since May 17, 1933.

CLEARO—This in solid letters describing insecticidal preparation. Filed by Florence A. Stokes, Dallas, Oct. 22, 1934. Claims use since June 1, 1933.

STANCO—This in solid letters describing polish. Filed by Stanco, Inc., Wilmington, Nov. 20, 1934. Claims use since Aug. 1, 1930.

LAUN-DU-RITE—This in solid letters describing laundry detergent. Filed by Du-Rite Chemical Co., Washington, Oct. 10, 1934. Claims use since March, 1930.

"TRU-BLU"—This in solid letters describing soap. Filed by F. L. Falck & Co., Pittsburgh, Oct. 15, 1934. Claims use since June 5, 1932.

H & B—This on reverse plate describing cleaning compound. Filed by Hendrie & Bolthoff Mfg. & Supply Co., Denver, July 14, 1934. Claims use since September, 1932, on cleaning compound and since January, 1924, on auto top and cushion dressing.

ZOLVOLENE—This in solid letters describing abrasive, detergent and polishing materials. Filed by Fischer's Surfa-Saver, Inc., Cincinnati, Oct. 8, 1934. Claims use since June 28, 1934.

TIPS—This in solid letters on carton describing laundry soap. Filed by Prouty-Bowler Soap Co., Des Moines, Nov. 9, 1934. Claims use since Sept. 1, 1934.

BORENE—This in solid letters describing borax soap. Filed by Mt. Hood Soap Co., Portland, Ore., Nov. 15, 1934. Claims use since Oct. 3, 1934.

STANCO—This in solid letters describing liquid cleaning preparation. Filed by Stanco, Inc., New York, Nov. 20, 1934. Claims use since Apr. 9, 1928.

CREST—This in old English letters describing metal polish. Filed by Honor-Brite Corp., Chicago, Nov. 21, 1934. Claims use since Nov. 27, 1933.

SKETCH OF DONKEY, rearing to kick, describing cleaner and polish. Filed by J. A. Sexauer Mfg. Co., New York, Nov. 22, 1934. Claims use since Dec. 30, 1925.

JACQUELINE—This in type resembling script, describing polishing and cleaning preparations. Filed by Wohl Shoe Co., St. Louis, Nov. 22, 1934. Claims use since Jan. 24, 1929.

FLIT—This in solid letters describing insecticides, disinfectants, deodorants, etc. Filed by Stanco Inc., New York, Nov. 17, 1934. Claims use since May 17, 1923.

STANCO—This in solid letters describing insecticides, disinfectants, deodorants, etc. Filed by Stanco Inc., New York, Nov. 20, 1934. Claims use since Apr. 9, 1928.

SEBA GLAND—This in solid letters describing toilet and medicated soaps. Filed by Albert Thierer, New York, Nov. 6, 1934. Claims use since October, 1933.

QUINTUPLETS—This in script describing soap novelty. Filed by Kerk Guild, Inc., Utica, N. Y., Nov. 12, 1934. Claims use since Oct. 29, 1934.

AL-KLOR—This in solid letters describing liquid dry cleaning detergent. Filed by Davies-Young Soap Co., Dayton, Dec. 7, 1934. Claims use since Aug. 14, 1934.

CORENCO—This in solid letters describing soap-making fats. Filed by Consolidated Rendering Co., Boston, Dec. 12, 1934. Claims use since July, 1920.

THE WHITE LILY—This in solid letters describing javelle water. Filed by Antonio Riccio, Rye, N. Y., Nov. 10, 1934. Claims use since July 1, 1933.

NORSEC—This in solid letters describing toothpaste. Filed by Norsec Co., Jersey City, Dec. 10, 1934. Claims use since Nov. 9, 1934.

TRADE MARKS GRANTED

320,442. Dental Powder. Merck & Co., Rahway, N. J. Filed August 17, 1934. Serial No. 355,111. Published October 23, 1934. Class 6.

320,549. Poultry Delouser. Nicodust Manufacturing Co., Los Angeles. Filed March 26, 1934. Serial No. 349,146. Published October 23, 1934. Class 6.

320,726. Shaving Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,912. Published October 23, 1934. Class 4.

320,727. Shaving Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,915. Published October 23, 1934. Class 4.

320,728. Shaving Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,916. Published October 23, 1934. Class 4.

320,729. Mouth Wash and Tooth Paste. Charles C. Algase, Philadelphia. Filed September 11, 1934. Serial No. 355,924. Published October 23, 1934. Class 6.

320,730. Shaving Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,918. Published October 23, 1934. Class 4.

320,789. Tooth Powder. Bertram Ball, Yonkers, N. Y. Filed May 17, 1934. Serial No. 351,448. Published October 23, 1934. Class 6.

320,799. Oil Soap, Cleansers, and Metal Polishes. Fleet-Wing Corp., Cleveland. Filed July 21, 1934. Serial No. 354,152. Published October 23, 1934. Class 4.

320,840. Liquid Polish. Perfect Manufacturing Co., Cincinnati. Filed August 15, 1934. Serial No. 355,034. Published October 30, 1934. Class 16.

320,873. Dental Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,917. Published November 6, 1934. Class 6.

320,878. Polishing Wax. S. C. Johnson & Son, Racine, Wis. Filed September 16, 1931. Serial No. 319,115. Published October 16, 1934. Class 16.

320,931. Preparation for Exterminating Rats and Mice. West Disinfecting Co., Long Island City, N. Y. Filed August 20, 1934. Serial No. 355,242. Published October 30, 1934. Class 6.

320,941. Dental Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,914. Published November 6, 1934. Class 6.

320,942. Dental Cream. William A. Webster Co., Memphis. Filed September 10, 1934. Serial No. 355,913. Published November 6, 1934. Class 6.

320,989. Soap. Worthall, Ltd., New York. Filed September 26, 1934. Serial No. 356,467. Published November 6, 1934. Class 4.

321,016. Insecticides. Sherwin-Williams Co., Cleveland. Filed August 24, 1934. Serial No. 355,416. Published October 30, 1934. Class 6.

321,017. Powdered Hand Soap. Edw. F. Heidenreich & Sons, Chicago. Filed August 27, 1934. Serial No. 355,472. Published November 6, 1934. Class 4.

321,020. Insecticides, Fungicides, and Parasiticides. Leffingwell Rancho Co., Whittier, Calif. Filed August 27, 1934. Serial No. 355,481. Published October 30, 1934. Class 6.

321,021. Insecticides, Fungicides and Parasiticides. Leffingwell Rancho Co., Whittier, Calif. Filed August 27, 1934. Serial No. 355,482. Published October 30, 1934. Class 6.

321,031. Insecticides. Western Chemical Co., St. Joseph, Mo. Filed September 7, 1934. Serial No. 355,823. Published October 23, 1934. Class 6.

321,046. Boiler Compound. Aganox Co., New Orleans. Filed August 1, 1934. Serial No. 354,530. Published October 30, 1934. Class 6.

321,074. Water Softener and Cleanser. Sir Klenso Manufacturing Co., Oklahoma City, Okla. Filed September 8, 1934. Serial No. 355,858. Published November 6, 1934. Class 6.

321,146. Soap. Elizabeth Arden, Inc., New York. Filed September 12, 1934. Serial No. 355,956. Published November 13, 1934. Class 4.

321,155. Hand Soap. Larkin Soap Co., Teaneck, N. J. Filed September 18, 1934. Serial No. 356,141. Published November 13, 1934. Class 4.

321,170. Cleaning, Polishing and Waxing Compound. Marveline Products Co., Lansing, Mich. Filed June 29, 1934. Serial No. 353,352. Published November 13, 1934. Class 16.

321,198. Cleaning and Polishing Compound. Murval Products Co., Philadelphia. Filed September 6, 1934. Serial No. 355,769. Published November 13, 1934. Class 4.

321,199. Deodorant and Germicide. Keefe Chemical Co., East Milton, Mass. Filed September 7, 1934. Serial No. 355,807. Published November 13, 1934. Class 6.

321,314. Washing Fluid. John Pelloni, Ellwood City, Pa. Filed August 21, 1934. Serial No. 355,270. Published November 20, 1934. Class 6.

321,323. Fumigant. Michigan Alkali Co., Wyandotte, Mich. Filed August 2, 1934. Serial No. 354,569. Published November 20, 1934. Class 6.

321,350. Finishes for Floors and Furniture. Noxon Chemical Products Co., Newark. Filed April 19, 1932. Serial No. 336,957. Published June 13, 1933. Class 16.

321,377. Shaving Cream. York Pharmacal Co., St. Louis. Filed October 10, 1934. Serial No. 356,980. Published November 20, 1934. Class 4.

321,382. Tooth Paste. Joseph Palazzolo, New York. Filed October 6, 1934. Serial No. 356,850. Published November 20, 1934. Class 6.

321,394. Insecticides, Soap Spray, Worm and Ant Destroyer and Weed Killer. American Color and Chemical Co., Boston. Filed October 6, 1934. Serial No. 356,828. Published November 20, 1934. Class 6.

321,405. Soap. Lever Brothers Co., Cambridge. Filed September 28, 1934. Serial No. 356,525. Published November 20, 1934. Class 4.

321,411. Furniture Polish. Baker Furniture Factories, Inc., Grand Rapids, Mich. Filed September 24, 1934. Serial No. 356,329.

New Patents

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES

815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 1,982,909, Insecticide Composition, Patented Dec. 4, 1934, by Wesley P. Flint and George L. Hockenyos, Urbana, Ill., assignors, by mesne assignments, to Monsanto Chemical Company. An insecticide for eradication of earthworms, a water dispersible emulsion containing a toxic agent and a material having relatively little toxic value, but having substantial irritating effect and capable of penetrating the surface of the earth to a substantially greater extent than the effective range of the toxic agent.

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No. 1,983,031, Sterilizing Composition, Patented Dec. 4, 1934, by Lester C. Himebaugh, New York, and Philip P. Gray, Hollis, N. Y., assignors, by mesne assignments to Parker, White and Heyl, Inc., New York, N. Y. A germicidal preparation for sterilizing at room temperature surgical instruments and other articles subject to impairment by heat or corrosion, the preparation containing approximately 4 per cent formaldehyde, an alcohol, a small quantity of a corrosion inhibiting agent comprising a nitrite and water, the water content of the solution being not substantially greater than 15 per cent.

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No. 1,984,646, Germicidal Preparation, Patented Dec. 18, 1934, by Emil Klarmann, Jersey City, N. J., assignor to Lehn & Fink, Inc., Bloomfield, N. J. A germicidal preparation comprising a cyclohexyl phenol, a substituted phenolic body of the class consisting of alkylated and halogenated phenols and having germicidal properties, an aqueous vehicle and a dispersing agent.

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M. Naef & Co., Geneva, have recently developed a new product called "Exaltolide" which is distinguished as a perfuming material by its extraordinary power of diffusion and exaltation. It has many properties similar to those of musk and ambergris, it is said, while avoiding the by-odors of animal and skatol notes which become troublesome to the perfumer in bouquets with fresh and flowery notes. Ungerer & Co., New York, agents for the sale of Naef products in United States, have a communication on the new product which they will be pleased to mail to interested parties on request.

GLYCERINE POSITION SAFE, SAYS DALTON

The glycerine industry is in a fairly safe position at present levels unless there is a major increase in the production of cheap substitutes, according to N. N. Dalton, director of research of the Glycerine Producers Association, in a brief report on the glycerine situation at the recent annual meeting of the Association. Mr. Dalton is former vice-president in charge of production of the Colgate-Palmolive-Peet Co. and an outstanding world glycerine authority. His report stated:

"Glycerine values in the United States depend on three fundamental factors that influence supply and demand. The first is naturally production and consumption which this year is fairly well balanced, the second is import movement which fluctuates with price, and the third is substitution which is also sensitive to market values. Nineteen thirty-four domestic production in terms of 80 pared to 119 million in 1933 and a 140 million high for per cent crude approximated 150 million pounds as comthe preceding five years. During 1929 and '30 consumption was sufficient to absorb production and imports and members' stocks fluctuated between 6½ and 15 million pounds. During the years 1931 and 1932 consumption was so light that even at a low rate of production members' stocks had increased by March of 1933 to 27 million pounds. January 1st of 1934, found glycerine producers with barely sufficient stocks to satisfy urgent demands. Sellers were forced to delay deliveries and restrict sales. Imports early in the year relieved the situation.

Total imports of crude and refined glycerine in 1934 approximated 13½ million pounds absolute as compared to 6½ million and 7¾ million pounds respectively in 1932 and 1933. As world prices of glycerine advanced to a level above import parity to the U. S., our imports have decreased from a figure of over a million pounds per month for the first ten months of last year to less than a half million pounds per month (unofficial figure) for November and December. This decrease in imports coupled with low production probably caused some reduction in stocks during December, but the first quarter of the year is normally an accumulating period and even with limited imports stocks should increase over the first four months of 1935.

Referring to the third value controlling factor, namely, that of curtailment and substitution, the industry is in a fairly safe position at present levels unless there is a major increase in production of cheap substitutes. Stabilization of values is best accomplished by increasing diversification of uses. This is the program the Association is working on, especially through research. Gradual shrinkage is explosives demand in the U. S. from 1918 on forced other outlets. Fortunately some new industries have arisen to take up part of the decreased demand from older outlets."

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The Trade Laboratories, Newark, N. J., moved recently to 412 Halsey Street, after twenty years at its previous location.

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CHEMICAL WORKS

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HERE IS YOUR SOURCE OF RELIABLE BASIC CHEMICALS

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CAUSTIC POTASH

SOLID, LIQUID, FLAKE, GRANULATED BROKEN

76%

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SOLID, FLAKE, CRYSTAL, GROUND, LIQUID

ISCO SILVER TALC

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WAXES

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117-119 LIBERTY STREET, NEW YORK.

FACTORIES:

Niagara Falls, N. Y.
Owego, N. Y.
Jersey City, N. J.

BRANCHES:

Chicago
Boston
Philadelphia
Cleveland
Gloversville, N. Y.

CONTRACTS AWARDED

Armour & Co., Chicago, have been awarded a U. S. Treasury Department contract covering 21,000 pounds of soap powder at a price of 2.88 cents per pound.

H. H. Rosenthal was recently awarded a contract covering 20,000 pounds caustic soda for the U. S. Bureau of Engraving & Printing, Washington, at a price of 3.12 cents per pound.

American Creosote Works, New Orleans, has recently been awarded contracts aggregating 40,000 gallons of creosote oil for U. S. Engineers, New Orleans, at a price of 13.24 cents per gallon.

Low bids were entered as follows on items for U. S. Treasury Department, Washington, in a recent bidding: H. H. Rosenthal Co., 160,000 lbs. laundry soda, 1.42c. per pound; American Cyanamid & Chemical Corp., 23,000 lbs. sodium thiosulfate, 3.22c. per pound; and American Soap & Washoline Co., 150 doz. pkgs. trisodium phosphate, 46 cents.

H. Kohnstamm & Co., New York, were recently awarded Brooklyn U. S. Army contracts covering 4,000 lbs. soap at 6.1c lb. and 4,500 lbs. soap at 6.22c. Kirkman & Son awarded 70,020 bars laundry soap at 3.13c and 20,550 cans scouring soap at 2.15. Colgate-Palmolive-Peet Co. awarded 84,700 bars white floating soap at 2.55c. H. H. Rosenthal awarded 480 lbs. soda at 5.7c. B. P. Ducas Co. awarded 9,000 lbs. soda at 1.94c. Sterling Supply Co. awarded 600 lbs. laundry sour at 8⅞c.

Day & Frick, Philadelphia, was low bidder on 4,600 cakes grit soap for St. Louis U. S. Army Quartermaster in a recent bidding, with a quotation of 2.05c. Colgate-Palmolive-Peet Co., Jersey City, was low bidder on 101,640 lbs. laundry soap with an offer of 3.183c per 16 ounce cake.

General Soap Co., San Francisco, was awarded a quantity of scouring soap for the Fort Mason, Cal., U. S. Army Quartermaster in a recent bidding, the price being 3.35c. Same company awarded an additional quantity of scouring soap at 4.175c and quantity of toilet soap at 2.475c. Commercial Soap & Chem. Co., San Francisco, awarded quantity of trisodium phosphate at 2.85c.

Bids are wanted by February 21, procurement 661-S, by the Procurement Division, Veterans' Administration, Washington, for 6,000 gallons of floor polish for Perry Point, and 4,000 gallons of floor polish for Chicago.

Bids are wanted by February 26, schedule 4266, by the Bureau of Supplies and Accounts, Navy Department, Washington, for 11,000 pounds of cleaning compound for painted surfaces.

Bids are wanted by February 20, circular 28, by the Purchasing and Contracting Officer, Quartermaster Corps, Langley Field, Va., for supplies of washing powder, scouring powder, soap flakes, and laundry starch.

P & G BUY PHILIPPINE SOAP PLANT

Procter & Gamble Co. is reported to have purchased for cash the business and properties of the Philippine Manufacturing Co., Manila, P. I., said to be the largest soap company in the Philippines. It was established in 1913, includes about twenty-five buildings covering fifteen acres, and also operates several copra crushing mills. About 500 people are employed at present. The company makes a wide line of toilet and laundry soaps, as well as oils, cooking fats and glycerin.

A number of prominent men in the New York grease and tallow trade met for their annual banquet at the Hotel New Yorker early this month. The organization is a very informal one confined strictly to this particular group, and dispensing with officers, speeches, set programs and all such impedimenta. Among those present were P. G. Buerk and J. E. Falkingham, Murray Oil Products; Joseph Cleaver and P. Peiffer, Raclin, Snow & Cleaver; Edward Frey and D. R. Horgan, Frey & Horgan; George Dausey, Vanderhove & Co.; William Clapp, Quaker Soap Co.; J. Barr, Long Island Soap Co.; William H. Kennedy, Kirkman Soap Co.; Harry Daibler, John T. Stanley Co.; William Holt, Colgate-Palmolive-Peet Co.; George Wharry and J. Kleinman, G. A. Wharry Co.; Fred Wolf and Edwin Stern.

Magnus, Mabee & Reynard, Inc., essential oils and perfuming materials, New York, have announced the appointment of Fernand G. Robin as representative in the Republic of Mexico. Mr. Robin will make his headquarters at Calle V. Carranza, Mexico, D. F.

The annual directors meeting of Compagnie Parento, Inc., was held in New York recently. At this meeting E. C. Barton, manager of Compagnie Parento, Limited, who came down from Toronto to visit the main offices of the company at Croton-on-Hudson, N. Y., was elected vice-president of Compagnie Parento, Inc.

Market Report on

TALLOW, GREASES, AND OILS

(*As of February 8, 1935*)

NEW YORK—Prices of soapmaking oils and fats continued to advance this period in a very strong market. Almost every item in the list advanced and though none of the gains were spectacular the net result was a substantial increase in the value of the stocks of soapmaking raw materials. The market was not particularly active, as buyers and sellers were not able to get together on their divergent ideas of values. Soapmakers seemed willing to pay the higher prices, but saw little point in doing so unless they could be assured of getting substantial quantities at those figures. Sellers, on the other hand, were not at all disposed to push matters, as they confidently expect further advances and are thus little interested in making substantial commitments at present levels.

COCONUT OIL

Both copra and coconut oil continued to advance this period. On the coast copra was quoted at 2 6/10c per pound, with sellers rather reluctant to extend their commitments. Coconut oil was quoted in the local market at 4¾c in tanks and 5¾c in drums, an advance of half a cent from last period.

CORN OIL

Corn oil registered a fractional price gain in a rather quiet market, and is quoted currently at 10⅛c for mill tanks.

COTTON OIL

Speculative activity in the cotton oil market slowed up this period, with uncertainty regarding the gold decision making traders disposed to take a waiting position for the time being. Offerings of crude oil in southern markets were light, with ruling quotations about half a cent a pound above last month's price for crude.

GREASE

Grease quotations were fractionally higher this period, with yellow and house grades holding around 5½c per pound. There still seems to be a prospect of considerably higher prices, as the hog crop is very much below normal due to the effect of the drought and the government's hog control measures.

PALM OIL

Palm oil scored a good advance this period and is now quoted at 4¼ to 4¾c per pound. Offerings are light.

TALLOW

Another advance was registered in tallow quotations this period, with city extra now being quoted at 6c per pound. Buyers and sellers have had difficulty in getting together on their ideas of price, with the supply side of the market holding out for 6¼c and users not interested at this figure unless they can acquire substantial quantities.

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FAT CONSUMPTION EXCEEDS PRODUCTION

Factory production of oils and fats in the United States during the fourth quarter of 1934 totaled 1,416,236,218 pounds, according to a report of the U. S. Bureau of the Census just issued. The total was made up as follows: vegetable oils, 730,259,920 lbs.; fish oils, 98,116,000 lbs.; animal fats, 498,603,199 lbs.; and greases, 89,257,099 lbs. During the quarter the production of crude coconut oil totaled 61,237,753 lbs., with consumption running far ahead and totaling 124,715,289 lbs. Stocks were cut down on December 31 to 152,747,045 lbs. Production of inedible tallow during the period amounted to 140,751,407 lbs., as compared with consumption of 190,029,073 lbs. Stocks at the end of the year were 326,487,266 lbs.

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WHALING RESTRICTIONS EFFECTIVE

The indiscriminate destruction of whales will cease, the League of Nations having at last received the essential number of ratifications for putting into force the international convention regulating whaling. This convention absolutely forbids the killing or taking of certain species of whales which have become rare, and prohibits the killing or taking of calves or immature whales or females accompanied by suckling calves. It has been estimated that about 40,000 whales had been killed in one season, and that at this rate, if continued, the whale would eventually disappear from the seas. The new Convention, which became effective January 16, gives to the International Bureau for Whaling Statistics at Oslo, Norway, the task of preparing for the League the annual returns, showing the outcome of the application of the Convention by its signatories.

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Among ships now building at Hamburg are nine vessels, with a total of 98,000 tons, for barter accounts. Four motor-tankers and two freighters are for Norway, and a tanker and two freighters for the Unilever soap combine. Most of these ships are to be exchanged against whale oil, which the German shipbuilders are to sell to German manufacturers.

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One of our readers is interested in learning the name of the maker of "DuBois Brushless Shaving Cream". The publishers of SOAP will greatly appreciate having this information if it is available.

Market Report on

SOAP AND DISINFECTANT CHEMICALS

(*As of February* 8, 1935)

NEW YORK—The market for soap and disinfectant chemicals showed a tendency to pick up after the turn of the year, and sellers report a satisfactory first month's business in most cases. The soap industry continues to operate at a good pace and as a result its consumption of alkalis has been well up to normal. On coal-tar products for disinfectant makers competition continued rather keen, with further easing in quotations on cresylic acid and naphthalene. Tar acid oils remain unchanged in price. The naval stores market displayed a much firmer tendency this period and some rather substantial gains in price were recorded on the paler grades of rosin.

ALKALIS

The demand for alkalis was somewhat irregular during the first month of the new year, although most sellers reported fairly satisfactory figures for their total shipments for the month. Prices were unchanged at the schedule previously in effect. New production entered the market this period with the opening of another southern plant.

CRESYLIC ACID

Quotations on cresylic acid showed a further tendency to ease off this period, and light oil is now generally quoted at about 46 to 47c locally, with dark grades at 43 to 44c. Low boiling oil is fairly steady at 64 to 65c.

NAPHTHALENE

Continued strenuous competition in this product led to a further reduction in price recently, and the market for refined flakes now holds around the level of 4½c to 5¼c lb.

ROSIN

Rather good sized advances were scored in rosin prices this month, with the most extensive gains occurring in the higher priced group. The increases in gum prices ranged all the way from 10c to $1.00 per barrel. Wood rosin was also advanced by producers, with I grade going up 40c per barrel. Stocks of gum rosin in southern ports are lower as a result of sharply reduced arrivals. Some of the stocks held in storage under government loans have been withdrawn to take care of demand.

TAR ACID OILS

The price level on tar acid oils continues to hold firm, with the ruling quotations on 15% to 25% oils ranging between 21 and 24c.

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The Laundryowners National Association has launched an "Approved Laundry" plan. Applicants for the "Approved Laundry" insignia must have their plants checked by a field inspector for physical equipment, processes and supplies, housekeeping, quality of washing and ironing, tensile loss of fabrics, whiteness retention, and sanitation. The plan is comparable in some ways with the public health system of grading diaries, e.g. bacterial count of the last rinse must not exceed that of the original water supply. In the past many of the better laundries, aware of certain competitors' shortcomings, have disapproved of broad claims in advertising campaigns, and therefore receive the new plan with enthusiasm. The approved laundry idea has been successfully tried out in New York, New Jersey and Pennsylvania. *Business Week*, Jan. 5th.

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C-P-P CANADA SALES UP IN 1934

The marked improvement in sales in Canada during 1934 by Colgate-Palmolive-Peet Co., Ltd., was due chiefly to providing a guaranteed profit for the retailer, and to steady, constructive advertising, according to C. R. Vint, vice-president, when interviewed recently in Montreal. In commenting, Mr. Vint stated: "In order to effect a guaranteed profit for the dealer it was necessary to price our products high enough to give the dealer a good return for his investment, yet low enough so that the public could afford to buy. After a good deal of research work we arrived at prices which solved these two problems. When these new arrangements were made known to the trade, the results were extremely gratifying. We have a great many letters of appreciation from our dealers in our files. The public, too, showed its appreciation of our price reductions by purchasing our products. Our sales curve showed a steady upgrade for the year. Our advertising, too, has played no mean part in placing us in our present strong position. All through the depression our products were advertised extensively and with great frequency. We believed that it was necessary to keep our products continually before the public even when buying power was at a low ebb, so that when people were able to purchase they would remember us. The reasoning has been justified to the fullest extent."

Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of February 8, 1935*)

NEW YORK—Scattered price changes, with no definite trend in one direction or the other, characterized the market for essential oils and perfuming materials this period. A number of advances were noted in special items, while others eased off as a result of the stronger position of the American dollar in foreign exchange. The trade is awaiting rather anxiously the Supreme Court decision on the gold clauses in contracts, as the government's gold policy has been one of the main factors in the advance in essential oil prices over the past two years. A reversal would greatly increase the purchasing power of the dollar and so cause substantial recessions in quotations on imported oils.

ANISE OIL

Anise oil gained rather sharply in price this period in a series of moves, and is now quoted at 44 to 46c per pound as against an inside of 40c only a few weeks ago. The Chinese market is strong, and local dealers seem disposed to follow the tone of the primary market in establishing their quotations. Demand is only routine.

BERGAMOT OIL

Bergamot oil eased off ten cents a pound this period, in spite of the much firmer shipment position in Italy. The inside price is now $1.40, with a range up to $1.70.

CASSIA OIL

Cassia oil continued its advance this period, with the market moving ahead another five cents. The current inside quotation is $1.25, and other figures range up to $1.40. Some dealers are of the opinion that further advances are justified to bring the market into closer alignment with replacement costs.

GERANIUM OIL

Exchange considerations contributed to a reduction in quotations on various grades of geranium oil this period. The spread in quotations continues very wide, with isolated figures meaning nothing unless considered in relation to quality and supplier.

PATCHOULI OIL

Quotations on patchouli oil are 25c per pound higher this period—the range being from $2.75 to $3.50. The advance is based on a sharp reduction in stocks in primary markets.

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LAVENDER OIL

(*From Page 19*)

in Kenya, British East Africa, but so far it is only a project. To the writer, another development seems to offer better chances as far as the United States is concerned. The post-war trend towards national economic isolation and self-sustenance has undoubtedly been accentuated by the unfortunate state of confusion existing between gold standard and off-gold standard countries and all these forces will undoubtedly shape our national life in an ever increasing number of features.

The United States is endowed with a great variety of climatic and soil conditions. We have more possibilities in this respect than most other countries and there seems to be no reason why we could not produce lavender in our own country if necessity arises. The attempt has been made several times but, as with all such beginnings, was crowned with little success. There is, however, one outstanding development which the writer had occasion to follow during the last few years and which now has reached a state beyond mere experimenting. After years of experimenting, lavender has actually been cultivated and distilled in Oregon. The brunt of this work has been borne by one pioneer who labored with little capital but with rare enthusiasm and devotion. The first oils were inferior and of spiky character. In later years, the oils showed a moist character which reminded almost of the English type of oil. But the small quantities produced last year were of excellent quality. They had the suaveness and yet the strong, warm fragrance of good lavender oils which so far had been produced only under the sun of La Provence. It is often claimed by French lavender growers that the cutting of the plants must be done by manual labor and that this feature alone would make prohibitive the production of lavender in the United States. It seems that the cutting of lavender by machine should not offer an unsurmountable problem to American engineers specializing in the construction of reapers, cutters and binders. A few modifications might make the machines suitable for our purpose.

The development in Oregon is still in its infancy and in order to be continued needs some financial support. May some progressive and enterprising financier, endowed with enough courage and vision, help to turn this modest beginning into a real success. America is already producing the bulk of the world's supply of oils of peppermint, sassafras, wintergreen and her comparatively new California citrus oil industry is a model of organization, applied science and modern distribution. There is hope that lavender, too, can be produced in America along similar lines.

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The federal excise tax of 5% on soaps and tooth paste and the 10% tax on toilet preparations are liable to be renewed for another year, in the opinion of Chairman Doughton of the House Ways and Means Committee, in which committee tax legislation must originate. The taxes were originally to have expired on June 30, 1934, but were continued for another year.

CURRENT PRICE QUOTATIONS

(As of February 8, 1935)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	.08½	.10
Acid, Boric, bbls., 99½%	ton	95.00	100.00
Cresylic, 97½ dk., drums	gal.	.43	.44
97-99%, pale, drums	gal.	.46	.47
Low boiling grade	gal.	.64	.65
Oxalic, bbls	lb.	.11	.11¼
Adeps Lanae, hydrous, bbls	lb.	.14	.15
Anhydrous, bbls	lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls	gal.	2.45	2.69
Complete Denat., No. 5, drums., ex. gal.		.34	.42
Alum. Potash lump	lb.	.03	.03¼
Ammonia Water, 260, drums, wks	lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls	lb.	.08	.12½
Bleaching Powder, drums	100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs	ton	50.00	55.00
Carbon Tetrachloride, car lots	lb.	—	.05¼
L. C. L.	lb.	.06	.08½
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	25.00
Cresol, U. S. P., drums	lb.	.10½	.11
Creosote Oil	gal.	.11½	.12½
Feldspar (200 to 325 mesh)	ton	14.00	15.00
Formaldehyde, bbls	lb.	.06	.07
Fullers Earth	ton	15.00	24.00
Glycerine, C. P., drums	lb.	.14	.14½
Dynamite, drums	lb.	.13¾	.14¼
Saponification, drums	lb.	.10	.10¼
Soaps, Lye, drums	lb.	.09	.09¼
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.			
Lime, live, bbls	per bbl.	1.70	2.20
Mercury Bichloride, kegs	lb.	.93	1.08
Naphthalene, ref. flakes, bbls	lb.	.04¾	.05¼
Nitrobenzene (Myrbane) drums	lb.	.09½	.11
Paradichlorbenzene, bbls., kegs	lb.	.16	.25
Paraformaldehyde, kegs	lb.	.38	.39
Petrolatum, bbls. (as to color)	lb.	.01⅞	.06¾
Phenol, (Carbolic Acid), drums	lb.	.14¼	.16
Pine Oil, bbls	gal.	.59	.65
Potash, Caustic, drums	lb.	.06¼	.06½
Flake	lb.	.07	.07¼
Potassium Bichromate, casks	lb.	.08⅛	.08⅝
Pumice Stone, powd	100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—			
Grade B to H, basis 280 lbs	bbl.	5.25	5.95
Grade K to N	bbl.	6.00	6.40
Grade WG and X	bbl.	6.90	7.50
Wood	bbl.	4.60	6.50
Rotten Stone, pwd. bbls	lb.	.02½	.04½
Silica, Ref., floated	ton	18.00	22.00
Soap, Mottled	lb.	.04⅛	.04⅜
Olive Castile, bars	lb.	.13	.19
powder	lb.	.21	.25
Olive Oil Foot	lb.	.07	.07½
Powdered White, U. S. P.	lb.	.16	.20
Green, U. S. P.	lb.	.06½	.08
Tallow Chips	lb.	.07¼	.07¾
Whale Oil, bbls	lb.	.05	.06
Soda Ash, cont., wks., bags, bbls. 100 lb.		1.23	1.50
Car lots, in bulk	100 lb.	—	1.05
Soda Caustic, cont., wks., sld	100 lb.	—	2.60
Flake	100 lb.	—	3.00
Liquid, tanks	100 lb.	—	2.25
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	11.40	14.00
Sodium Fluoride, bbls	lb.	.07½	.09¼
Sodium Hydrosulphite, bbls	lb.	—	.22
Sodium Silicate, 40 deg., drum	100 lb.	—	.80
Drums, 60 deg. wks	100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.			
Tar Acid Oils, 15-25%	gal.	.21	.24
Trisodium Phosphate, bags, bbls	lb.	.03	.0355
Zinc Oxide, lead free	lb.	.06	.06¼
Zinc Stearate, bbls	lb.	.18	.19

Oils — Fats — Greases

Castor, No. 1, bbls	lb.	.10¼	.11
No. 3, bbls	lb.	.09¾	.10½
Coconut			
Manila, tanks, N. Y.	lb.	.04½	.04¾
Tanks, Pacific coast	lb.	—	.04⅜
Drums	lb.	.05½	.05¾
Cod, Newfoundland, bbls	gal.	.36	.38
Copra, bulk, coast	lb.	.0255	.0260
Corn, tanks, mills	lb.	.10	Nom.
Bbls., N. Y.	lb.	.11	Nom.
Cottonseed, crude, tanks, mill	lb.	—	.10
PSY	lb.	—	Nom.
Degras, Amer., bbls	lb.	.04¾	.05½
English, bbls.	lb.	.05½	.06½
German, bbls.	lb.	.06	.06½
Neutral, bbls.	lb.	.09	.12
Greases, choice white, bbls., N. Y.	lb.	.05⅝	.06⅛
Yellow	lb.	.05⅜	.05½
House	lb.	.05⅜	.05½
Lard, City	lb.	—	.13¾
Compound tierces	lb.	.13½	.13¾
Lard Oil,			
Extra, bbls.	lb.	—	.09¼
Extra, No. 1, bbls	lb.	—	.09
No. 2, bbls.	lb.	—	.08¼
Linseed, raw, bbls., spot	lb.	.0910	.0950
Tanks, raw	lb.	—	.0850
Boiled, 5 bbls. lots	lb.	—	.1030
Menhaden, Crude, tanks, Balt	gal.	.25	Nom.
Oleo Oil, No. 1, bbls., N. Y.	lb.	—	.11½
No. 2 bbls., N. Y.	lb.	—	.11
Olive, denatured, bbls., N. Y.	gal.	.93	.95
Foots, bbls., N. Y.	lb.	.08	Nom.
Palm	lb.	.04¼	.04¾
Palm Kernel, casks, denatured	lb.	.04½	Nom.
Peanut, domestic tanks	lb.	.10	Nom.
Red Oil, distilled, bbls.	lb.	.07⅞	.08⅞
Saponified, bbls.	lb.	.07⅞	.08⅞
Tanks	lb.	—	.07
Soya Bean, domestic tanks, N. Y.	lb.	—	.08¾
Stearic Acid			
Double pressed	lb.	.10½	.11½
Triple pressed, bgs.	lb.	.13¼	.14¼
Stearine, oleo, bbls.	lb.	.10½	Nom.
Tallow, special, f.o.b. plant	lb.	—	.05¾
City, ex. loose, f.o.b. plant	lb.	—	.05⅞
Tallow, oils, acidless, tanks, N. Y.	lb.	—	.08¼
Bbls., c/l, N. Y.	lb.	—	.08¾
Whale, crude	lb.	.03½	.04
refined	lb.	.06¾	.07

(*As of February 8, 1935*)

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.00	$2.50
Bitter, F. F. P. A.	lb.	2.25	2.75
Sweet, cans	lb.	.58	.60
Anise, cans, U. S. P.	lb.	.44	.46
Apricot, Kernel, cans	lb.	.22	.25
Bay tins		1.25	1.50
Bergamot, coppers	lb.	1.40	1.70
Artificial	lb.	1.00	1.30
Birch Tar, rect. tins	lb.	.70	.78
Crude, tins	lb.	.12	.16
Bois de Rose, Brazilian	lb.	1.25	1.40
Cayenne	lb.	2.80	2.90
Cade, cans	lb.	.26	.30
Cajuput, native, tins	lb.	.50	.60
Calamus, tins	lb.	3.25	3.50
Camphor, Sassy, drums	lb.	—	.19
White, drums	lb.	—	.20
Cananga, native, tins	lb.	2.50	2.55
Rectified, tins	lb.	2.95	3.00
Caraway Seed	lb.	1.90	2.20
Cassia, Redistilled, U. S. P.	lb.	1.30	1.40
drums	lb.	—	1.25
Cedar Leaf, tins	lb.	.60	.70
Cedar Wood, light, drums	lb.	.22	.25
Citronella, Java, drums	lb.	.32	.37
Citronella, Ceylon, drums	lb.	.24	.30
Cloves, U. S. P., tins	lb.	.90	.92
Eucalyptus, Austl., U. S. P., cans	lb.	.27	.30
Fennel, U. S. P., tins	lb.	1.00	1.25
Geranium, African, cans	lb.	4.75	7.25
Bourbon, tins	lb.	4.50	6.40
Hemlock, tins	lb.	.70	.75
Lavender, U. S. P., tins	lb.	3.00	7.00
Spike, Spanish, cans	lb.	1.20	1.60
Lemon, Ital., U. S. P.	lb.	1.00	1.20
Lemongrass, native, cans	lb.	.85	1.10
Linaloe, Mex., cases	lb.	1.35	1.50
Nutmeg, U. S. P., tins	lb.	1.20	1.35
Orange, Sweet W. Ind., tins	lb.	1.70	1.85
Italian cop	lb.	1.60	2.25
Distilled	lb.	.65	.70
Origanum, cans, tech.	lb.	.60	.70
Patchouli	lb.	2.75	3.50
Pennyroyal, dom.	lb.	1.85	1.90
Imported	lb.	1.35	1.70
Peppermint, nat., cases	lb.	2.90	3.15
Redis., U. S. P., cases	lb.	3.15	3.45
Petit, Grain, S. A. tins	lb.	1.05	1.10
Pine Needle, Siberian	lb.	.85	.90
Rose, Natural	oz.	5.50	18.00
Artificial	oz.	2.00	3.00
Rosemary, U. S. P., tins	lb.	.32	.38
Tech., lb. tins	lb.	.28	.35
Sandalwood, E. Ind., U. S. P.	lb.	5.00	5.50
Sassafras, U. S. P.	lb.	.75	1.00
Artificial	lb.	.45	.50
Spearmint, U. S. P.	lb.	1.75	2.10
Thyme, red, U. S. P	lb.	58	1.02
White, U. S. P.	lb.	.65	1.10
Vetivert, Bourbon	lb.	7.50	8.50
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	4.60	7.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.50	$2.25
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	1.00	1.10
Benzaldehyde, tech	lb.	.60	.65
U. S. P.	lb.	1.10	1.30
Benzyl, Acetate	lb.	.60	1.00
Alcohol	lb.	.75	1.15
Citral	lb.	1.90	2.20
Citronellal	lb.	2.25	2.50
Citronellol	lb.	2.55	3.00
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	1.05	1.25
Eucalyptol, U. S. P.	lb.	.62	.65
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	1.25	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	3.00	3.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.60	6.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	3.00	4.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.15	3.20
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	5.75	6.00
Ketone	lb.	6.25	6.50
Moskene	lb.	5.00	6.00
Xylene	lb.	2.00	2.50
Phenylacetaldehyde	lb.	4.00	6.50
Phenylacetic Acid, 1 lb., bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.25	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.54	.58
Terpineol, C. P., 1,000 lb. drs.	lb.	.33	.35
Cans	lb.	.36	.37
Terpinyl Acetate, 25 lb. cans	lb.	.80	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	3.50	4.00
Yara Yara	lb.	1.30	2.00

Pyrethrum Products

Insect powder, bbls.	lb.	.34	.37
Concentrated Extract			
5 to 1	gal.	2.05	2.10
15 to 1	gal.	5.75	6.00
20 to 1	gal.	7.80	7.85
30 to 1	gal.	11.55	11.60

Gums

Arabic, Amb. Sts.	lb.	.09	.09½
White, powdered	lb.	.13	.13½
Karaya, powdered No. 1	lb.	.08	.09
Tragacanth, Aleppo, No. 1	lb.	1.15	1.20
Sorts	lb.	.11	.12

Waxes

Bees, white	lb.	—	.33½
African, bgs.	lb.	.21	.22
Refined, yel.	lb.	.25	.26
Candelilla, bgs.	lb.	.13	.14
Carnauba, No. 1	lb.	.32	.33
No. 2, yel.	lb.	.31	.32
No. 3, chalky	lb.	.19	.21
Ceresin yellow	lb.	.36	.38
Paraffin, ref. 125-130	lb.	.03¾	.04¼

PATENTS FOR SOAP ARTICLES

(*From Page 27*)

supplying soap in fine shavings. The following patents have been granted for this feature: Schwechler, 824,152, June 26, 1906. A cake of soap having a curved side and a flat side, and an opening extending longitudinally through the central portion.

Shaver, 824,154, June 26, 1906. A cake of soap adapted for use in a soap-shaving machine, having an end thereof adapted without deformation detachably to interlock with an end of a second cake to retain the cake in position during the process of cutting. Conery, 875,985, Jan. 7, 1908. A soap cake comprising a cylindrical body of soap having grooves extending from the outside of the cylinder inward towards its center, and having near the center an axial opening of non-circular outline. Dilg 945,495, Jan. 4, 1910. Projections are provided on the cake of soap to prevent it from rotating in unison with the cutter during the process of cutting.

Dilg 999,210, Aug. 1, 1911. A cake of soap adapted for use in soap-shaving machine, having a plurality of abutting walls formed at one end thereof and adapted to engage corresponding walls on a second cake to retain the cake in position during the process of cutting, the cakes being freely separable.

Dilg 999,211, Aug. 1, 1911. A cake section adapted for use in a dispensing machine, having a surface adapted to detachably engage sidewise a side face of a second cake section with an interlocking action.

Haddow 1,026,438, May 14, 1912. A soap cake having a protruding end and opposite thereto a complementary hollow end, a hole endwise therethrough and a helical groove in said hole.

Gluck 1,501,657, July 15, 1924. A cake of soap adapted for use in a dispensing machine and having a frustro-conical convex face on one end and a substantially frustro-conical concave face on the other end, the faces being provided with irregularities adapted to fit and interlock with a similar cake of soap.

It may not be amiss to call attention here to the existence of nearly fifty issued design patents for ornamental configurations of cakes of soap. The mechanical patents discussed in this article have been granted for novel structural details of the cake. The manufacturer should remember that where no novelty resides in the structure of the cake it is often possible to protect his particular shape of soap by obtaining a design patent for it, provided, of course, it involves some novel and original ornamental configuration.

(*To Be Concluded*)

Alsop Engineering Corp., New York, has appointed W. H. Lilly its Ohio representative. Mr. Lilly, who has had wide experience with liquid processing equipment, will cover Frankfort, Louisville, Indianapolis and neighboring districts in addition to the general Ohio territory. His headquarters are located at 1903 Berkley Avenue, Cincinnati.

PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

Cosmetic Toilet Soaps

Manufacture and Properties of Special Soaps Containing 5-10 per cent of Petrolatum or Lanolin

PRACTICAL directions and precautions in superfatting toilet soaps with lanolin or petrolatum have been given in a recent issue of the *Riechstoff-Industrie* by Josef Augustin. The custom which has been practiced by a few manufacturers of designating soaps containing only a very minor amount of lanolin or petrolatum as lanolin- or petroleum jelly soaps has developed a feeling of distrust in these products. Such slightly superfatted soaps should either be given no designation or one indicating the relative amount of such material, or they should merely be called superfatted soaps. This is because the content of lanolin or petrolatum should be sufficient to lend the soap a definite cosmetic value.

Lanolin or petrolatum soaps should not be prepared from soap stock containing a high proportion of coconut oil fatty acids. Since these superfatted soaps are expected to be particularly mild in their action on the skin, it is not wise to start with a soap which may be irritating in itself. In spite of the soothing effect of the lanolin, such a soap will be sharper than the usual toilet soap which has had no such addition, for example, one containing 8 per cent of coconut oil fatty acids made in the ordinary way. Therefore soaps containing lanolin or petrolatum should have as a base as mild a toilet soap as possible, and an appreciable content of one of these superfatting agents.

Pure tallow soap or palm oil soap or that made from plant fatty acids other than coconut oil or palm kernel oil, will furnish a very mild soapstock. But in such a case the lathering properties will not be great enough, so that a certain amount of coconut oil soap must be present. Suitable soaps can be prepared with as high as 25 per cent of coconut oil. The irritating action of coconut oil soap is reduced by the presence of a few per cent of castor oil fatty acids. By a suitable combination of fatty acids, the emulsifying power of the product can be increased sufficiently to take care of the lanolin or petrolatum without too great a loss of foaming power. This is very important to many users who associate lathering power with the usual properties of soap. On the other hand, a number of users are willing to dispense with easy lathering if they can obtain a milder soap which has an added cosmetic value.

The custom has developed of superfatting with 5 per cent of fat. However, 5 per cent of petrolatum decreases the emulsifying power so greatly that in spite of the small affinity of the petroleum jelly for the skin, it remains as a thin layer of grease on the skin after the soap has been washed off. The deposition of petrolatum is greater, the smaller the amount of coconut oil soap present. If the intention is to leave a film of fat, as in the case of dry skins, the amount of coconut oil soap should be as small as possible.

The best results are obtained with emulsions of the type of oil-in-water. In this case it is possible, with efficient mixing, to obtain a soap containing as much as 10 per cent petrolatum without too great a loss in lathering power and without an excessive coconut oil content. Hydrolysis alkali set free, is counteracted by the fat, which also forms a protective layer on the skin. This results in the skin feeling soft and smooth, rather than dry and chapped.

Most toilet soaps containing petrolatum or lanolin are made with only 1 or 2 per cent of these. But these are not true cosmetic-soaps. The action of the cosmetic agent

EDITOR'S NOTE: In American practice, soaps containing an appreciable percentage of petrolatum, lanolin, or similar cosmetic agent, are frequently referred to as "cold cream soaps."

should be stressed rather than the soap. Soaps containing 5 or 10 per cent of lanolin or petrolatum are those which deserve the name. These soaps may be softer than toilet soaps free from such additions, but still they are readily pressed, compact and close. With soaps in the form of a cream, the lanolin content can be increased to 25 per cent of the fat mixture. Higher percentages than this interfere with the necessary action of the soap.

The following fat mixtures are suitable as a base for making both lanolin and petrolatum soaps:

1. 90 kilograms of tallow, 10 kilograms of coconut oil.
2. 80 kg. of tallow, 18 kg. of coconut oil, 2 kg. of castor oil.
3. 55 kg. of tallow, 10 kg. of lard, 30 kg. of coconut oil, 5 kg. of castor oil.
4. 90 kg. of palm oil, 8 kg. of coconut oil, 2 kg. of castor oil.
5. 50 kg. of palm oil, 20 kg. of olive oil, 25 kg. of coconut oil, 5 kg. of castor oil.

Various superfatted soaps to meet the different demands can be made according to the following directions, using soaps made from the above mixtures:

A. Petrolatum soaps which leave a protective layer on the skin after washing, creamy but low in lathering power. Mix thoroughly 95 kg. of soap base number 1 with 5 kg. of white petrolatum. If the price permits, use specially treated high grade petrolatum. This is made for use in cosmetic creams. For the cheaper grades of soap, yellow petrolatum serves the purpose. Increased skin protection and a creamy type of lather, are obtained with soaps made from tallow only, or tallow and lard, or lard and olive oil, or vegetable fats other than coconut oil. Such soaps are exceptionally mild but are suitable only for those who do not object to slow lathering, with only a small amount of lather, particularly in cold water. With the omission of emulsifying agents, the pure petroleum soaps must be worked up on cylinders which are not cooled or only slightly cooled, particularly in the beginning. Soaps which do not contain coconut oil require longer working than the others.

It is possible to obtain pure white soaps containing petroleum jelly. The degree of whiteness can be increased by the use of about 1 per cent of zinc oxide or titanium oxide. Strong perfume is not ordinarily used with these soaps. Lavender or rose or other ethereal oils compatible with use on the skin, are suitable.

B. High-content petrolatum soaps, with moderate lathering power. Mix 90 kg. of soap base number 1 with a nearly cooled melt of 8.5 kg. of white petrolatum jelly, 1 kg. of wool fat, and 0.5 kg. of cetyl alcohol. Working these together takes about the same time as in *A*.

C. High-content petrolatum soaps, with good lathering power. Mix 90 kg. of soap base number 2 with an almost cooled melt of 8 kg. of white petrolatum, 1 kg. of wool fat and 1 kg. of lanette wax (sold in America as Brilliant Avirol). The time required for working up this mixture is much less than that for *A* and *B*.

D. High-content petrolatum soaps, with relatively very good lathering power. Mix 90 kg. of soap base number 3 or 5 for about 5 minutes with 2 kg. of casein solution. Mix in an almost cooled melt of 6 kg. of petroleum jelly, 1 kg. of wool fat, and 1 kg. of Brilliant Avirol. The time for working together this mixture is about half as long as for *A* or *B* but longer than for *C*. This type of soap leaves less of a protective layer after washing, but still permits action on the skin by the fat during washing.

Toilet soaps which approach petrolatum soaps in appearance, hardness and foaming power can be produced with 2 to 3 per cent less petroleum jelly, but the cosmetic effect is less striking. The casein solution mentioned is prepared as follows: Let 1 kg. of alkali-soluble casein swell for 2 hours in 2 kg. of cold water. Dissolve 130 grams of borax in 2 kg. of hot water and stir this solution into the casein mixture. Warm until solution is complete. Let partially cool, stir in 100 grams of triethanolamine and after 5 minutes, 200 grams of castor oil fatty acids.

Lanolin soaps are prepared similarly to the petrolatum soaps. Cold process coconut oil soaps are not used. Lanolin combines with soaps more easily than petroleum jelly, decreases lathering power less, and penetrates the skin more readily in washing. The addition of 5 per cent of lanolin has no marked effect on lathering power or stability, and introduces scarcely any odor.

E. Lanolin soaps with a thick, rich lather. Mix 95 kg. of soap base number 1, 2, or 4 with 5 kg. of wool fat. To avoid loss, the perfume is added at the end of the mixing period.

F. High-content lanolin soaps with moderate lathering power, exceptionally mild. Work up 92 kg. of soap base number 1 or 4 with a luke-warm melt of 7 kg. of wool fat, 0.5 kg. of wool wax and 0.5 kg. of Brilliant Avirol.

G. High-content lanolin soaps with good lathering power. Mix 90 kg. of soap base number 3 or 5 with 2 kg. of casein solution for about 5 minutes and work in a luke-warm melt of 7 kg. of wool fat and 1 kg. of Brilliant Avirol.

High-content lanolin soaps with free cholesterol can also be prepared. Such soaps as those given above should improve the condition of the skin. There is considerable difference between the cosmetic action of these soaps and that of ordinary toilet soap with no additions of petrolatum or lanolin. Small amounts of proteins, glycerine, etc., also have a beneficial action. The production of special superfatted soaps may be of importance in counteracting the increasing tendency to replace toilet soap with cleansing creams.

Chemistry of Wetting Out Agents

IN A recent issue of the *Chemical Bulletin*, W. Kritchevsky discusses modern wetting out agents. A large number of these products have been placed on the market by different companies. Innumerable patents have been issued during the last few years. The action of a wetting out agent consists essentially in reducing surface tension and in dissolving the fatty film covering the surface of the textile. Both actions are simultaneous. When used in small quantities in a dyeing or finishing bath, the substance wets out the textile immediately, removes the surface impurities by dissolving and emulsifying the fatty film, and carries the scouring, dyeing or finishing material through the fiber.

A good wetting out agent must not precipitate in hard water or by the action of acids, alkalies, or electrolytes. A number of methods have been devised for evaluating wetting out agents. The method published in the annual Year Book of the American Association of Textile Chemists and Colorists consists of measuring the time required for a 5 gram unboiled 36 inch skein of grey 2-ply cotton yarn to sink in a solution of the wetting agent under completely standardized conditions. The skein, carrying a 1½ gram sinker is held below the surface of the wetting solution by a heavier weight called the anchor. A good wetting agent should be effective in concentrations of 0.24 to 0.40 per cent at a temperature of 25° C. or 77° F. This is comparable to industrial practice.

Chemically, the wetting out agents can be divided into four classes, according to whether they are derived from hydrocarbons, alcohols, acid esters, or amides. Below is given a representative of each class, R indicates hydrocarbon ring, or a chain having 8 to 18 carbon atoms. It is also understood that various common substitutions can be made, such as phosphoric acid for sulfuric acid, coconut oil fatty acid for oleic acid, etc.

The most important of the hydrocarbon derivatives are known under such names as "Nekals", "Alkanols" and "Neomerpins". They are made by condensing naphthalene beta sulfonic acid with alcohols consisting of three carbon atoms or more, such as isopropanol, butanol, etc.

Higher alcohols are treated with sulfuric acid to give esters. These, when neutralized have the general formula RCH_2OSO_3Na. These agents are known as "Gardinols". They are derived from lauryl alcohol, myristyl alcohol, and oleyl alcohol. Those derived from palmityl alcohol and stearyl alcohol are finishing agents known as "Avirols".

The fatty acid ester derivatives may be represented by the formula $RCOC_2H_4SO_3Na$. Igepon A belongs to this class. It is made by condensing oleyl chloride with the ethionic acid. By condensing one molecule of oleic acid with one molecule of ethylene glycol and treating the resulting ester with sulfonic acid, a similar agent is obtained. The ethylene glycol can be replaced by glycerine or any other polyvalent alcohol.

Fatty acid amide derivatives may be represented by the general formula $RCONHC_2H_4SO_3Na$. A commercial product is Igepon T, obtained by condensing oleic acid with taurine. "Sapamines" are made by condensing oleyl chloride with asymmetrical diethylethylenediamine. Sapamines are excellent wetting out agents in acid solution but precipitate in alkaline solution. When these compounds are further alkylated with dimethyl sulfate, ammonium compounds are formed that are stable in acid and alkaline solution.

It is noteworthy that all of these wetting agents possess on one hand a chain or ring of 8 to 18 carbon atoms, the oil-attracting group. On the other hand, there is a water-attracting group such as sulfonic acid or a similar group. The former might be called the oleophilic group and the latter the hydrophilic group. They are connected through a strong polar group, which may involve a double bond as in the case of Nekal; an atom of oxygen as in the case of Gardinol or Avirol; the COO group as in the case of Igepon A; or a CONH group as in the case of Igepon T or Sapamine.

In order for a chemical substance to be an efficient wetting out agent, it must have the three groupings, the oleophilic, the hydrophilic and the polar connection. Its wetting out strength in oil or water will depend on the properties of each one of these groupings. Those whose oleophilic chain contains between 8 and 14 carbon atoms inclusive wet out best in water. Those whose oleophilic chain contains from 16 to 18 carbon atoms do not wet out so well but are finishing agents. In the case of oleic acid, the double bond makes it act like a chain of 9 carbon atoms instead of 18.

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The higher fatty alcohols are now produced on a large scale by the catalytic reduction of fats. The method was referred to in the discussion of the sulfated fatty alcohols which appeared in the March issue of SOAP The alcohols are finding many new uses related to their chemical character as alcohols, their physical properties as fatty materials and specific properties of their own. They are good emulsifying agents and are often combined with soap in emulsifying water and oils. They are used as superfatting agents in several types of products, among them shaving creams. Kurt Lindner. *Seifensieder-Ztg.* **61,** 833-4 (1934).

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Compositions which form a copious, durable foam contain soaps, alkylolamines and acids, other than soap-forming fatty acids and their sulfonation products. For example, commercial triethanolamine is mixed with phthalic, benzoic, salicylic or naphthalene sulfonic acid and incorporated with soap. Ormul Products, Ltd. French Patent No. 765.836.

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PERSULFATES IN DETERGENTS

The demand for persulfates by the soap manufacturer is on the increase. Persulfates of ammonium, sodium and potassium are used as active oxidizing agents, both for bleaching soap and in proprietary soap powders. Although the more general practice is to bleach the oils and fats before saponification, some soap-makers prefer to bleach the soap mass in the pan.

Ammonium persulfate is excluded from use with certain soaps, due to the odor of ammonia which is given off. The ammonium salt possesses the advantage of being more soluble than either sodium or potassium persulfate. For this reason, the two latter salts are added in the form of a paste. Addition of persulfate is not made until spent lye has been removed. Bleaching takes place by the liberation of oxygen. The extent of the reaction can be followed with great accuracy.

Where the soap composition contains an appreciable proportion of rosin, preference is given to sodium persulfate. A small excess of alkali must be added to allow for that taken up during the process. The soap must be stirred thoroughly during the addition of persulfate. Bleaching action usually continues for some time. After the salt has been mixed through the mass, the whole is boiled for a time and allowed to stand before finishing the process. The amount of persulfate to add is calculated from the proportion of fat present, and seldom exceeds 1 per cent.

In making special cleansing and bleaching powders, the ingredients are mixed in the dry state. The components are usually bought in a more or less finished condition and simply mixed in special sifting and mixing machines. Paul I. Smith. *Soap, Perfumery and Cosmetics Trade Review* **7**, No. 11, 15-16 (1934).

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CHLOROPHYLL IN TALLOW

The best definition from a soap-maker's point of view, of a green tallow is one which will produce a green soap when saponified in the usual way. The raw fat may be noticeably green, or it may carry sufficient red and yellow coloring matter to mask the green. The objection to using green tallows in soap-making is that the soaps produced appear definitely dull and muddy. The green color is mainly due to the presence of chlorophyll, which is probably introduced by contact with offal in rendering. This is borne out by the fact that butchers' scrap is not usually green, while pig-grease rendered from the whole carcasses of small pigs, is intensely colored. Chlorophyll is fat-soluble and when dissolved in fat is not easily removed. It may be removed by bleaching, but this involves additional handling and expense.

The surest test to determine whether a tallow will produce green soap is to saponify it alone and note the color of the soap it produces. To carry out such a soap-making test on a small scale requires about two days. A simpler test which can be applied to solid fats is carried out as follows: Two 4 ounce bottles are filled two-thirds full of the melted fat. In one bottle of fat is placed a coil of clean copper wire or a strip of clean copper sheet. This bottle is then placed in an air oven and held at 110-115° C. for one hour. The first sample is melted, and both are chilled quickly in the refrigerator. When crystallization is complete, the fats are examined. The extent to which the solidified tallow has increased in green will indicate the probable color of the soap from it. The test is rapid and positive. It is based on the fact that pure chlorophyll which is a magnesium compound, changes to a more stable and more highly colored copper compound in contact with metallic copper. When a green fat is liquid, it is difficult to judge the color by the Lovibond or other comparative methods. It is even more difficult to determine the color of the copper-treated fats in the liquid phase. The saponification test is the only reliable one in this case. J. A. Skogstrom. *Canadian Chem. and Met.* **18**, 274-5 (1934).

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A NEW CHEMICAL FORMULARY

A second edition of *The Chemical Formulary*, edited by H. Bennett, and published by D. Van Nostrand Co., has been published. The second edition is distinctly an improvement on the first, but like the first, it contains formulas which are obsolete, faulty, or downright ridiculous. Listing of proprietary compounds as parts of formulae, which we considered a bad fault of the first edition, seems to have been pretty much eliminated in the new edition. The book carries an imposing array of names under the title, "Board of Editors,"—but we wonder if all the formulas were really checked by the "board." Several pages of advertising for chemical experimental "kits" are included.—a rather queer feature of a "book of practical formulas for all fields of industry." On the whole, however, this formula book is an improvement over other works of a like type which have preceded it. At the same time, we see in any book of formulas designed for laymen and for those in industry who are without technical training, the common danger of "a little knowledge." Only the ingredients and a smattering of procedure can be given. We still maintain that no book of this type is of genuine practical value.—or a substitute even in small part for the experienced expert consultant.—Ed.

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No simple set of directions can be drawn up for avoiding loss during the purification of oils. While similar oils with similar acid numbers but with different degrees of contamination, will require the same amount of alkali to neutralize the fatty acids present, the alkali should be used at different concentrations. Oils with a dark color should be neutralized with concentrated alkali. Oils containing a large amount of protein and similar matter, should be neutralized with dilute alkali. The temperature should be kept as low as possible, consistent with the type of fat or oil being purified. This is to avoid saponification of neutral oil. R. Heublum. *Seifen-, Oel- und Fett Industrie* **20**, 366-7 (1934).

ON PRODUCTS AND PROCESSES

A good quality cold-process toilet soap can be obtained by using the amount of alkali required to saponify the fatty acids completely and then adding a superfatting agent. The product has better physical properties and is less friable than soap made in the old cold-process way by using about 14 per cent less than the required amount of alkali for complete saponification. J. Davidsohn. *Les Matieres Grasses* **26,** 10347-8 (1934).

Proteins make suitable additions to toilet soaps when a mild product is desired, either with or without superfatting agents. The protein decreases the alkaline action of the soap, partly by absorption and partly by neutralization. Egg albumen, serum protein, casein, gelatin or other similar proteins can be used. Some of them, particularly albumens, cannot be heated above 60° C. or they will become denatured, lose their swelling power, etc. To prepare casein for use in soap, let 1 kg. of pure alkali-soluble casein stand in 2 kg. of cold water for 2 hours. Stir 120 grams of borax and 20 grams of disodium phosphate into 2 kg. of boiling water. After this has cooled to 70° C. stir in 30 grams of triethanolamine and after 15 minutes 50 grams of ricinoleic acid. Add this preparation to the casein for solution and emulsification. If the casein solution is not used immediately, it must be preserved or it will go bad. Soap can be worked up with 5-6 per cent of the casein solution, and, if desired, 2-3 per cent of lanolin. The protein increases lathering power. Josef Augustin. *Seifen-, Oel- und Fett Industrie* **20,** 382-3 (1934).

Transparent soft soap is prepared from soya bean oil or from the fatty acids from soya bean oil. Up to 10 per cent of rosin can be introduced. Up to 20 per cent of waste animal fat can be used, but in that case, saponification must be entirely with caustic potash. R. Krings. *Seifensieder-Ztg.* **61,** 982-4 (1934).

Soaps are mixed with alkylolamine salts of acids, other than soap-forming acids and their sulfonation products, in order to stabilize the soap and improve the lathering properties. As an example, these salts are formed by warming triethanolamine to about 80° C. with naphthalene sulfonic acid, benzoic acid or salicylic acid. The salts may be sirupy liquids or semi-solid products. Jack Leben and Ormul Products, Ltd. British Patent No. 414,077.

Grained soap has a higher fatty acid content than fitted or cold-process soap. The finished soap usually has a fatty acid content of 68-70 per cent which rises to 75 per cent on storage. Generally speaking, the process of graining consists in the gradual dehydration of the soap separated from the lye in a granular form to a condition in which it can no longer retain any froth or air bubbles and becomes neat. At this stage, it is kneaded into a homogeneous mass after settling of the lye. R. L. Datta and T. Basu. *Soap, Perfumery and Cosmetics Trade R.* **7,** No. 11, 12 (1934).

A new shaving brush contains a central cylinder for holding liquid soap. The cylinder is fitted with a rubber tube which is surrounded by the brush so that the liquid can be forced through this tube onto the brush. Walter Brodiak, Canadian Patent No. 346,917.

A metal cleaning composition contains orthophosphoric acid and an organic soap of vegetable derivation, the composition being free of oils, waxes and greases. Howard R. Neilson. Canadian Patent No. 346,474.

The Twitchell method of fatty acid separation gives the percentage of saturated acids, the percentage of solid unsaturated acids and together with the iodine value gives a basis for calculating the content of oleic and linoleic acids. The Kaufman and thiocyanogen number gives the percentage of unsaturation, and by difference the amount of saturated acids. The percentage of acids having more than 1 unsaturated bond can be obtained by comparison with the iodine value. Thiocyanate is taken up by only 1 bond, iodine by all of the unsaturated bonds. The difference between the two values indicates the presence of unsaturated acids having more than 1 unsaturated bond in their structure, and the amount gives the percentage of such acids present. G. E. Corman. *Can. Chem. Met.* **18,** 223-4 (1934).

A study of the changes in fats during storage shows that not only peroxides, but also small amounts of aldehydes may be produced when fats are oxidized. In the course of oxidation of cottonseed oil in light, aldehyde appears only after about 5 days, with a 100 watt lamp at 3 feet, while peroxide appears under the same conditions in considerable amounts in 1 day. C. H. Lea. Dept. Sci. Ind. Research, Rept. Food Investigation Board. 33-7 (1934).

Wetting, dispersing and washing agents are made by esterifying glycolic or glycerolic ethers of aliphatic alcohols of molecular weight 158-270, by means of monochlor acetic acid, and causing the products to react with a sulfite. J. R. Geigy, S. A. French Patent No. 760,138.

EFFECTS OF SOAP WRAPPERS

The quality and kind of paper used for wrapping soap is a matter of great importance, as any impurities such as free acid or sulfite in the paper may quickly spoil the appearance of soap, which may have been made with the utmost care from the best materials. The main essentials of a soap wrapper are that it shall be sufficiently impervious to prevent undue loss of water and perfume, and that there shall be nothing in it to contaminate the soap.

Vegetable parchment made from wood pulp contains on a dry basis 22 p.p.m. of copper and 50 p.p.m. of iron. Grease-proof paper and loaded vegetable parchment contain much larger quantities of metals. Either neutral or acid olive oil will dissolve traces of copper and iron from vegetable parchment. In view of the well known action of traces of metal causing rancidity development in soap, paper wrappers which may contain metal impurities should be avoided.

Experiments on the autoxidation of fats wrapped in transparent paper and exposed to strong sunlight show that if the wrapper is colored deep green, blue, brown or red, oxidation is almost completely inhibited. For the lighter tints the oxidation is almost as great as if there were no wrapper at all. When waxed paper is used, it is very important to ensure that the wax shall not have undergone any oxidation, since the oxidation products of the wax induce autoxidation of the wrapped material. J. Strachan and W. L. Davies. *Chem. and Ind.* ***53***, 973-5 (1934).

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Experiments were carried out in order to study the saponification of hard fats by the cold or half-boiled process. The results show that it is entirely possible to saponify tallow completely by either of these methods. Not only can this be done but soap can be made in this way without the addition of salt for salting out. Saponification is carried out using as little water as possible. Usually caustic soda solution of 38° Be. was used. The mass is therefore in a viscous, semi-fluid condition. It is because of this that salting out by the concentrated alkali is hindered. The traces of soap first formed are in intimate contact with the remaining fat, due to active stirring and high viscosity, and act as an emulsifying agent. This promotes further saponification. In this way the speed of salting out is very slow, while the speed of saponification is very rapid. These two conditions are necessary in order to obtain complete saponification by the cold or half-boiling methods. The physical mechanism is quite different from that of the boiling process. I. Davidsohn. *Seifensieder-Ztg.* **61**, 939-41, 961-2 (1934).

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The catalytic hydrogenation of fatty acids containing at least 8 carbon atoms and their derivatives, consists in contacting these materials with hydrogen at a temperature from 100 to 300° C., with an active hydrogenation catalyst, until substantial quantities of saturated alcohols are formed. I. G. Farbenind. Aktiengesellschaft. Canadian Patent No. 346,878.

SPOILAGE OF OLEIC ACID

The early stages of the autoxidative spoilage of oleic acid and its esters have been studied. By repeated recrystallization and purification, oleic acid was obtained as a completely colorless oil having a melting point of 6.5-8° C. as contrasted with a melting point of 14° previously reported for "pure" oleic acid. Purified esters were also prepared. In contrast to the steady increase in total oxygen absorption, the amount of peroxides and of epihydrinaldehyde in the samples is apt to fluctuate more or less as oxidation progresses. The tendency to autoxidation decreases on passing from oleic acid to the ethyl ester to the glycol ester to the glyceride. The tendency of linoleic acid to autoxidize is disproportionately large as compared to oleic acid, when the degree of unsaturation is considered. Apparently the two double bonds in linoleic acid exert some sort of influence on each other. Light has an effect on oxygen absorption and also on peroxide and aldehyde content similar to that of catalysts such as ferrous chloride, ferric chloride and cupric chloride. The peroxide and Kreis tests are of qualitative value in detecting rancidity but are without quantitative significance. K. Taeufel and A. Seuss. *Fettchem. Umschau* ***41***, 107-13, 131-7 (1934).

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Glassware is said to be cleaned efficiently with sodium lauryl sulfate which has been made slightly acid with hydrochloric acid. Glassware washed in this way rinses well and is free from dullness and streaks. The detergent is particularly effective in removing a greasy film. *Manufacturing Chemist*, **5**, 416 (1934).

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SODIUM SESQUISILICATE

(*From Page* 31)

gap between metasilicate and caustic. An examination of the accompanying graph shows the relationship even more clearly. It is interesting to note that five pounds of soda ash in 95 pounds of water gives the same pH as 0.2 pound of metasilicate in 99.8 pounds water or 0.1 pound of sesquisilicate in 99.9 pounds of water. On the basis of equal alkali content this would mean 2.9 pounds, 0.06 pound and 0.04 pound respectively, a striking comparison.

IN LAUNDRY work, this high, controlled pH is a very desirable factor. Although the correct pH for laundry work is by no means a settled question, certainly some laundry schedules are best worked at a high pH and here sesquisilicate is a very convenient agent. Where waters have a relatively high bicarbonate content the additional alkali content of sesquisilicate is very attractive. Sesquisilicate is much safer to use than caustic, yet gives a pH only about 0.4 below it.

In one laundry test, the substitution of sesquisilicate for T.S.P. resulted in a reduction of 90 per cent in the number of rewashes and in another, whiteness retention of 100 per cent was officially reported on a test cloth washed twenty times in this new detergent.

In washing glassware, the wetting characteristics of

metasilicate have been very useful. Its ability to cut through grease films and rinse free, leaving a brilliant glass is now well known. Such difficultly removable soils as mayonnaise or dried milk curd is rapidly attacked. Sesquisilicate has this ability to no less degree and is able to attack greases even more rapidly than metasilicate. Washing jars for preserving foods, or cleaning milk bottles is an ideal task for this vigorous detergent.

The cleaning of metals preparatory to plating or enameling is a problem requiring much care and study. Sodium metasilicate used at concentrations of 3 to 5 oz. per gallon has been very successful. Sometimes the addition of a little rosin or soap has been necessary. Sometimes, however, even this has been insufficient and some caustic has been necessary to give a well-cleaned metal. In such a case the substitution of sesquisilicate for metasilicate and caustic would give good results and avoid the nuisance of carrying stocks of two materials.

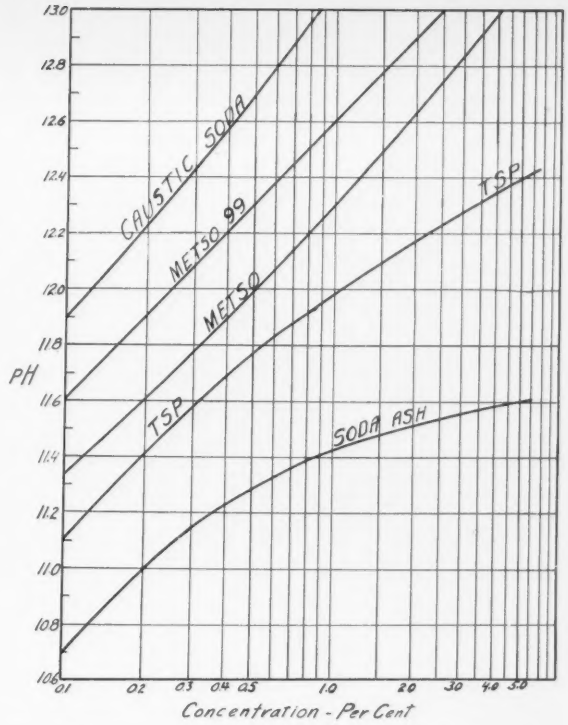
It must be understood of course that sesquisilicate cannot be substituted at will for metasilicate. There are many cases where the higher pH would be undesirable or unnecessary. It is definitely more likely to etch sensitive metals than is the metasilicate, but it is much less likely to affect them adversely than is caustic or even some of the other alkalies often regarded as mild. It must be remembered that the buffering effect of silica is available only in the soluble silicates.

In substituting sesquisilicate for metasilicate only four-fifths as much should be used at the beginning and this may in many cases be reduced because, as we pointed out above, a higher pH will result. Where it is desired to maintain the same pH as given by metasilicate only one-half as much sesquisilicate should be used.

Combined with a small amount of soap, five to ten per cent sesquisilicate makes a very good cleaner for garage floors, grease-pits, etc. The powder may simply be sprinkled over the greasy surface, allowed to remain a few minutes and then flushed off with a hose; the dirty oil is floated loose and washed into the drain. The same process may be used for cleaning floors in food factories, packing houses, etc. So also may heavy, greasy machinery be cleaned and paraffin oils, drawing compounds, or lubricating greases removed from metal surfaces.

One characteristic of sesquisilicate which should be recognized by users who combine it with other ingredients for resale is that it absorbs water somewhat more readily than does sodium metasilicate. Metal containers should therefore be used where long storage is contemplated. However, it is not so hygroscopic as caustic soda. Sesquisilicate is freely and completely soluble in water. When it dissolves, careful measurements show that the solution increases in temperature very slightly. Caustic solutions, it will be remembered, become quite hot while the action of metasilicate is in the opposite direction, that is, the solution becomes noticeably cooler.

Sodium sesquisilicate is another link in the chain of soluble silicates for detergent uses. While their qualities overlap they are not, in general, to be substituted freely for each other. Each has a field where it is best fitted to serve. The field for sesquisilicate is that where a higher alkali, higher pH is required; where metasilicate is not quite strong enough; where caustic soda is too violent. Thus its many qualities suggest a popular interest primarily in the field of cleaning.



The pH of various alkali solutions charted according to per cent concentration. Metso 99 is the trade name for Sodium Sesquisilicate, Metso is Sodium Metasilicate, and TSP, of course, is trisodium phosphate.

MAKING SOAP EMULSIONS

Soap is used as an emulsifying agent in a great variety of products, such as polishes, insecticides, etc. Soap-stabilized emulsions in which the soap is formed *in situ* by having the requisite amounts of alkali and fatty acid present in the water and oil respectively, require little, if any homogenization. In preparing insecticides for spraying purposes, 0.6 per cent of oleic acid is dissolved in the hydrocarbon oil and 0.1 per cent of aqueous caustic soda solution used. Another use for soap as an emulsifying agent is in the laundry trade where an emulsion of paraffin wax is used as a glossing agent in the calendering of linen. Ammonia soap is preferable and it is desirable that the soap should be formed *in situ*. A recommended formula is to mix 33 parts of paraffin wax with 3 parts of oleine, and pour this mixture into a solution of 0.6 part of strong ammonia in 63.4 parts of water, heated to 160° F. *Perfumery and Essential Oil Record* **25**, 400-1 (1934).

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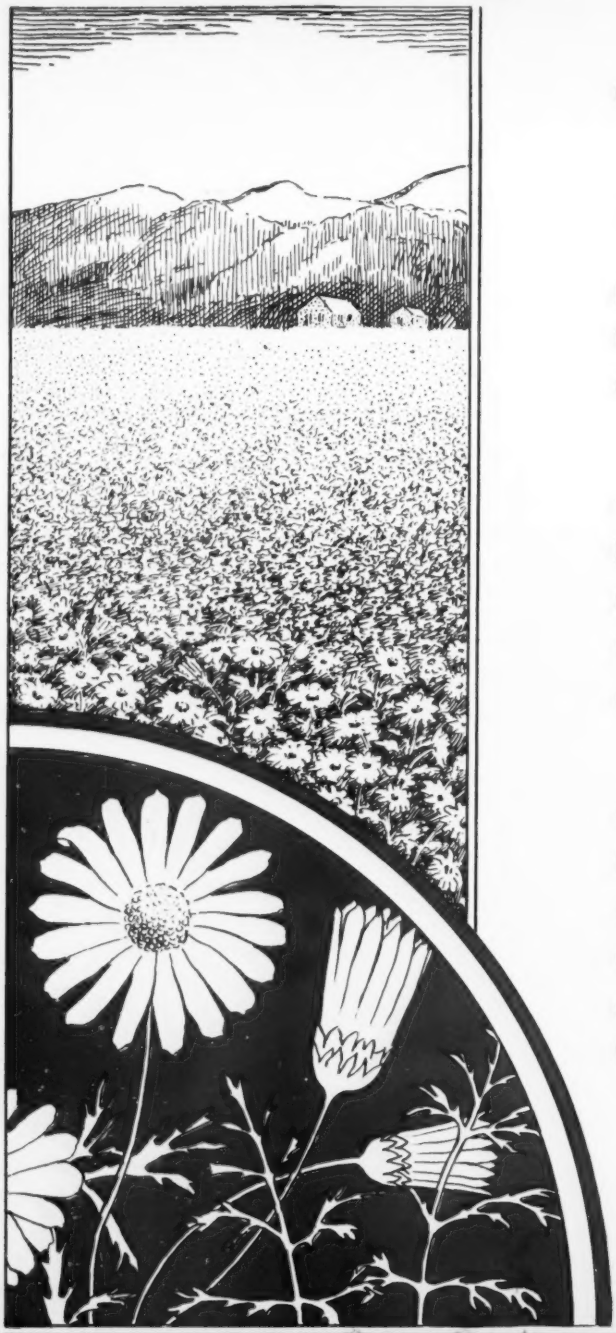

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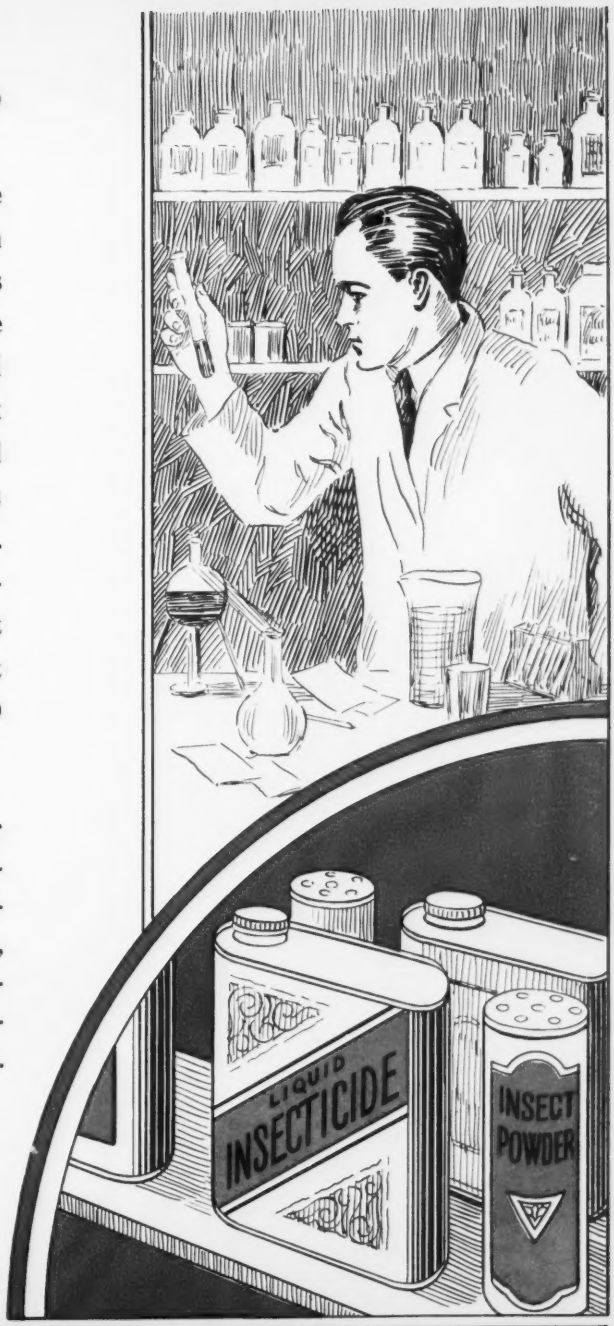
NOT only have we specialized in the production and sale of Pyrethrum Products, but during the number of years which we have been in the business, we have carried on intensive chemical and biological research. Our laboratory work has been substantiated by practical field research. Our entire research program has been centered on Pyrethrum Products . . . a highly specialized research program designed to find out more and more about Pyrethrum Products, resulting in constant and definite improvement in POWCO BRAND Products.

Our ability today to produce a better Pyrethrum Product, to guard against common shortcomings and to deliver the greatest killing power content per dollar of cost, is a direct result of our years of "specialization" both in research and in the commercial production of Pyrethrum Products.



THAT'S THE THING"

& COMPANY, Inc.
New York, N. Y.

POWCO BRAND
REG. U.S. PAT. OFF

Let's Forget "STANDARDIZATION" *for a Moment*

IT MUST seem to the manufacturer of insecticides that his is the most uncertain business in the world. Competitors' prices may often seem to be far too low. He is tempted to lower the standard of his product but hesitates for he knows that it must stand the test of actual use in the hands of the consumer. He reads and hears a variety of claims and counter claims made by manufacturers of concentrates and sellers of pyrethrum flowers.

Yes, we'll admit we make these claims, too, and we are just as certain as our competitors that we are right. In this maze the insecticide manufacturer naturally looks for some solid foundation on which he can build his business.

We will admit it is a problem, not only for him, but for us. We have spent thousands of dollars in conducting experiments and building equipment. We have made numerous attempts to determine some method of measuring pyrethrin content in a finished concentrate of pyrethrum, and experiments still continue. Biological tests have margins of error too great for revealing small differences in the value of concentrates, or insecticides, yet these differences may affect his cost as much as 10% or more.

It is possible for us to be very definite about certain things. For instance, the pyrethrin content of the flowers we use. This can be, and is, determined accurately. From there each step is checked and checked again until finally Pyrocide 20 is produced which the manufacturer has found from actual experience represents full value as to toxicity and cost.

We are as weary as many manufacturers of insecticides must be of the continued question "Which concentrate represents the best value?". We submit as our best selling arguments these facts.

* * *

The manufacture of Pyrocide 20 is in the hands of four graduate chemists. This skilled supervision is more expensive, but it insures us against the many errors that are possible in so highly technical a business and makes the actual production of Pyrocide 20 more than just a routine process.

From the day it was introduced five years ago, Pyrocide 20 has been the leading pyrethrum concentrate. During those years it has experienced a steadily increasing sale to both new and old customers.

* * *

The research work conducted by McLaughlin Gormley King chemists has not only contributed to the perfection of Pyrocide 20, but has also added a great deal to the general knowledge of pyrethrum flowers.

* * *

We have never shipped to a customer a concentrate we were not confident was absolutely as represented.

* * *

Briefly, we have done our best to establish not only a sales record but a feeling of confidence and trust in the minds of those with whom we deal. We'll forget standardization for the moment and solicit your use of Pyrocide 20 solely on this past record. May we have your consideration?

McLAUGHLIN GORMLEY KING COMPANY

MINNEAPOLIS · MINNESOTA

DEODORIZED INSECTICIDES HAVE AN

INSTANT SALES APPEAL!

There is still a widespread belief that any product that has insect killing qualities *must* have a disagreeable odor.

But this belief is rapidly disappearing. Deodorized insecticides, fly sprays, and disinfectants find a ready market. Consumers are quick to realize the value of an odorless or pleasant-scented product. In many places where they are used they are considered indispensable. *No other kind will do!*

Today's keen competition forces improvements in odor. Progressive manufacturers are now telling the world that their products are *deodorized*. Wherever this appeal is used it is rewarded with increased sales! You can give *your* product a better odor. We have specific odors available for almost every type of insecticide. Write to us for samples and full information.

CITRENE for soap, cleaners and polishes. Stronger, pleasanter, cheaper than Citronella.

FLORENE covers kerosene odor in sprays and insecticides with a sharp, clean, refreshing scent.

KERODOR NO. 1 neutralizes the kerosene odor in insecticides inexpensively . . . effectively. Leaves pleasant odor.

KERODOR NO. 2 completely overcomes the kerosene smell and leaves a pleasant, flowery scent in its place.

ODRENE for use alone or in combination in sprays, polishes. A powerful, low-priced oil.

LAVENE is especially good as deodorant in polishes. Also effectively deodorizes fly sprays.

LILAC SPRAY OIL B-3223-2 is especially blended to overcome the odor of kerosene in fly sprays.

NEW MOWN HAY OIL B-3470 is one of the most popular in fly sprays. Especially effective in killing kerosene odor.

PARATINTS color and perfume "paradi" blocks, bath salts or moth balls in one operation . . . and do it better because of uniform penetration and more effective perfumes.

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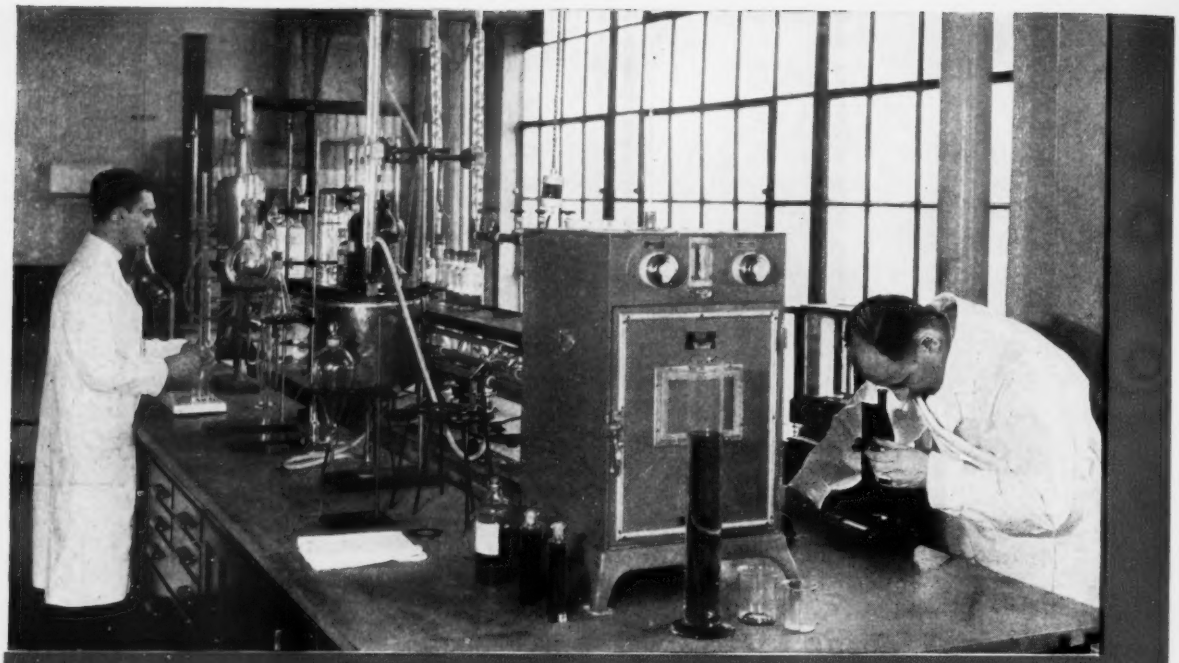

A section of McCormick's new Insecticide Laboratory, used exclusively for the testing of insecticides. Here the high killing power of Pyrethrol 20 is maintained by constant tests of the basic ingredients and the finished concentrate.

HIGH KILLING POWER

ASSURED BY CONSTANT LABORATORY CONTROL

Other McCormick Standardized Pyrethrum and Derris Products

PYRETHRUM POWDER: Finest available, with a known high pyrethrin content. Milled with modern equipment which makes heat accumulation impossible. Ground extremely fine—contains more killing particles—remains suspended in the air longer. More effective and economical because it comes into more intimate contact with vital parts of insect's body.

DERRIS EXTRACT: Containing 5.0 grams of rotenone per 100 c. c. plus the other toxic derivatives of derris root.

DERRIS RESINATE: Containing 25% rotenone and 75% active resins.

ROTENONE CRYSTALS: As Solvate, 71% rotenone—C. P. and technical grades.

DERRIS POWDER: Finest powder in the world. Standardized at 4% and 5% rotenone. Suitable for use in aqueous sprays. Will not clog spray nozzles.

WHAT makes customers come back for your insecticide is results—uniform, dependable high killing power! And that can come only from constant, thorough laboratory control of the active killing element.

PYRETHROL 20 is a superior, standardized pyrethrum concentrate because the necessary amount of high-test pyrethrum flowers is used in processing each gallon of the extract. The quality of the ingredients entering into PYRETHROL 20 is determined at all times by chemical assay. Then double checked by actual spraying on household insects. Only by this constant exacting effort are we able to produce an always uniform concentrate of the desired high killing power.

Make your insecticide a repeater by assuring swift death to insects—every time. Write to McCORMICK & CO., Baltimore, Md. for full information on PYRETHROL 20.

McCormick's PYRETHROL 20

BIGGER SALES !
..by CONTAINER *showmanship!*

MODERN methods call for sales by *showmanship.* Color-labeling treatments are giving the CONTAINER a voice in the market-place. They flash a product quality signal to the trade. "EMPECO" Packaging—Designing and Decoration —points products into favorable opinion. It invites the purchase that *contents* merit can fully justify.

- Trade Up! — with a Better Package!
- Full-color Lithographed • Sized to suit.
- Plain CANS too!

METAL PACKAGE CORPORATION

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WHAT MAKES ONE PARADICHLORBENZENE OR NAPHTHALENE OUTSELL ANOTHER?

THE ANSWER IS

Fragrance AND *Color* . . .

EYE APPEAL and nose appeal constitute two of the most powerful buying agents in the market. You should make your Para and Naphthalene blocks with this thought definitely in mind.

FELTON COLOROMES help you corner sales that might normally go to your competitors. In one single operation they PERFUME and COLOR your blocks—in one operation they add a DOUBLE sales appeal—in one operation they can increase your sales to new heights.

FELTON COLOROMES are uniform, 100% effective, thoroughly tested, dependable, economical. They come in most wanted fragrances and colors—at low prices which make them worth your serious consideration. Coloromes can also be supplied without color.

COLOROMES

PERFUME AND COLOR IN ONE SINGLE SIMPLE OPERATION

•

FELTON CHEMICAL COMPANY

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Manufacturers of AROMATIC CHEMICALS, NATURAL ISOLATES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

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SANITARY PRODUCTS

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

The Editorial View

THE expected flood of new legislation, both in Congress and state legislatures, has already commenced, says John Wright, secretary of the National Association of Insecticide & Disinfectant Manufacturers. The new Copeland Bill, containing many of the objectionable features of the bill, which failed of passage last year, has been introduced in Congress. There are also two other so-called food and drug bills which directly affect almost all disinfectants, insecticides, and allied products. Then in the various states, bills have been introduced which through taxes, or restrictions, affect these products. So far Missouri, South Dakota, and Texas have considered measures of this kind. In New Jersey, where the present restrictions on the sale of various insecticides, disinfectants, rodenticides, etc., are causing a considerable furore, a new licensing and regulatory measure for exterminating and fumigating has been proposed.

These are probably just the beginning of a year of legislative activity. Eternal vigilance will be the price of business liberty this year more than ever before. Taxes, licenses, and other restrictions for the privilege of doing business will become innumerable if a close watch is not kept. Every manufacturer in every section of the country is urged to report at once to the office of the secretary of the Association any state or municipal legislative proposal which will directly affect the manufacture or sale of a disinfectant, germicide, antiseptic, insecticide, or allied product. This is a problem of the entire industry, and one in which every firm should cooperate for it will only be through unified efforts backed by the prestige of a national trade association that this legislative tide can be stemmed.

UNLESS the total sale of insecticides is increased during the 1935 season, the situation will again resolve itself into a fight for such routine business as has been available. Without a larger total of insecticide sales, every increase by an individual firm will mean a loss to some other firm or firms. As has been discussed elsewhere in this issue, there is not much point in concentrating all the sales energies of an industry in a free-for-all fight to take business away from each other. If only a part of this sales effort were aimed at boosting the total business, it would mean more business for each company and a tendency to lessen the sharpness of competition. This brings us back again to the oft discussed subject of cooperative selling, whether it be in the form of advertising, publicity, or what not. The greatest obstacles to the increase in insecticide sales for the individual firm are not competitive products. Rather they are represented by the resistance on the part of consumers to the use of any insecticide at all. Is it not timely to bring up again the subject of ways and means of breaking down this resistance by the industry as a whole?

ON February 27th, the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers will hold a special meeting in New York. If there are matters to come before that board, matters which have a direct bearing on the insecticide and disinfectant industry as a whole, now is the time to lay them before the president or secretary of the Association so that they may be presented when the meeting is held.

National Association of Insecticide *and* Disinfectant Manufacturers

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Active—Open to manufacturers and wholesale distributors of disinfectants, germicides, deodorants, insecticides, liquid soaps, polishes, and allied products. Dues—$75.00 per year.

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For further details, communicate with

NATIONAL ASSOCIATION OF INSECTICIDE & DISINFECTANT MANUFACTURERS

John H. Wright, Secretary

CHRYSLER BUILDING **NEW YORK**

Notes of the Trade

Selig Co., Atlanta, has recently added seven new products to its line. They are: "Glashine," a window cleaning preparation; "Phenosol," a surgical disinfectant; "O-Brite-O," self-polishing floor wax; "Cinch," ink remover; "Foamaway," rug cleaning compound; "Selcoseal," synthetic gum floor finish; and "Whiteway Cleaner," for grease removal.

David W. Lynch has become associated with the sales department of John Powell & Co., New York, and will make his headquarters at the Chicago office of the company, 350 North Clark St., Chicago. He will work under the direction of Harry J. Ahles, mid-western representative for John Powell & Co.

San-Ex-Co Exterminating and Products Co. has opened a new laboratory at 949 Jennings St., Bronx, N. Y. A complete line of insecticides and disinfectants will be sold under the San-Ex-Co trade name.

The annual sales meeting of United Sanitary Chemicals Co., Baltimore, was held recently at the Southern Hotel in that city. Mitchell Rosenfeld, assistant manager, was in charge of the affair, and introduced several guest speakers who talked on sanitation. The evening preceding the meeting a surprise party was given in honor of M. L. Schuster, general manager of the company.

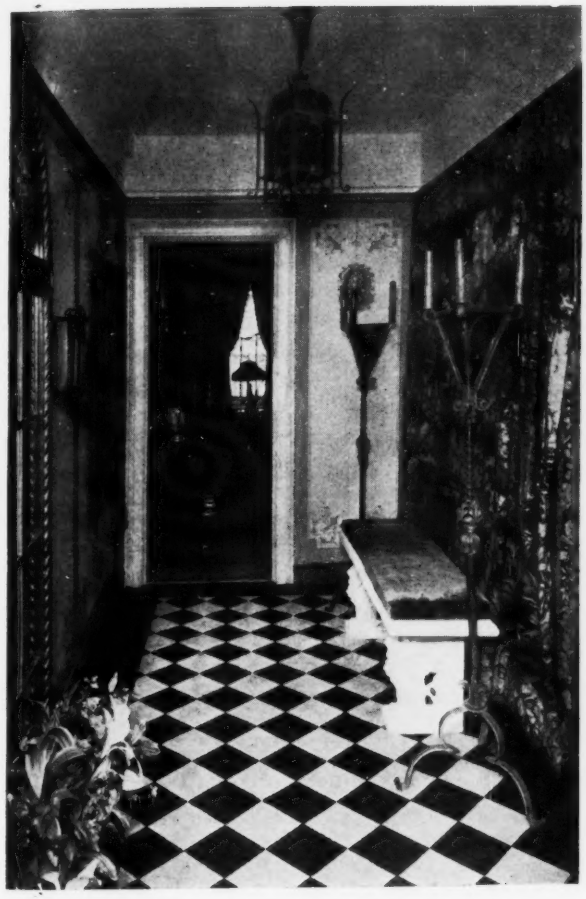
Walter Janvier, Inc., New York, distributor of "Shu-Milk," shoe cleaner, is planning an increased advertising program for that product in 1935. In addition to 100 newspapers, national magazines will be added this season. Advertising is handled by W. I. Tracy, Inc., New York.

An extensive advertising campaign is being conducted by the Trichicide Co., Dallas, Tex., on its remedy for athlete's foot sold under the name, "Trichicide."

The Continental Exterminating Corp. of 887—5th Avenue, Brooklyn, has enlarged its headquarters at that address and also has opened a New York office located at 521—5th Avenue, New York City.

L. M. Hannum is now sales and advertising manager of George J. Kelly, Inc., Lynn, Mass., manufacturer of shoe polishes. For the last few years he has been sales manager for Hewes & Potter, Boston. Previously for many years he had been general manager of the Whittemore Bros. Corp., Cambridge, Mass., shoe polishes.

Frederick Stearns & Co., Detroit, have repackaged their "Astring-O-Sol" tooth paste in a new blue package with white and orange lettering.



FLOOR WAXES

By C. A. TYLER, Ph.D.

THE organic solvent type of floor wax has been manufactured for many years. More recently, water base emulsion floor waxes have been developed, but even before the advent of these products, wax emulsions were used for other purposes. Each type of floor wax possesses certain advantages and disadvantages, due chiefly to the difference in the nature of the liquid carrier. This discussion will deal first with the organic solvent base floor wax, and later with the emulsion type.

Volatile solvent waxes are manufactured in two forms, paste and liquid. As far as the final result is concerned, either type can be used. On large floor areas, the wax is sometimes applied by machine, and here the liquid form has to be used, as it is delivered in a thin stream and spread mechanically. Equipment for small-scale or domestic use consists of a smooth oblong block covered with a soft material and attached to a long handle, and a weighted buffer similarly designed. Any clean, soft cloth can be used just as well for applying the wax. After the wax has been applied and allowed to dry, it must be rubbed up to give a good finish. The principle in applying either the paste or the liquid is the same, which is that the wax should be spread in as thin a film as possible in order to get a high gloss. If an excess is used, the excess will have to be rubbed away before a good lustre can be obtained. It is therefore both undesirable and wasteful. The paste type gives a quicker and some people believe, a better gloss.

The choice of paste or liquid for the householder is one of individual preference. The main difference between the two is in the wax content. Liquid waxes contain from 7 to 15 per cent of total wax. The paste form contains from 22 to 28 per cent of total wax. The method of manufacture is somewhat similar. In either case the waxes are melted and the solvent poured slowly into the melted wax with stirring. The exact method of processing is very important because of the nature of the ingredients. Each manufacturer has his own carefully worked out method.

In making the paste form, the containers must be left open until the contents are entirely cold, which may be some time after setting has occurred. Pastes sometimes show a tendency for the liquid content to sweat out, particularly in warm weather. The liquid then appears as drops on the surface. A practical test to see whether separation is apt to occur, is to press the surface of the paste with a finger. If the liquid squeezes out, the combination of wax and liquid is poor and the wax may show this particular defect later.

It is possible to vary the physical appearance and the behavior of the finished wax, either the liquid or paste, by varying the method of manufacture, which means principally the cooling process. The way in which the wax crystallizes out of the solution directly affects its physical properties. Sometimes the wax will crystallize in hard grainy particles. When spread on the floor, a uniform film will not be obtained. The hard particles will remain as individual grains, so that a good finish is impossible.

Practically all liquid waxes separate into two layers on standing for a long enough period of time. Therefore they should be labelled as a general thing with directions to shake before using. Also they are quite subject to changes with change of temperature. They freeze easily, that is some of the ingredients will crystallize when the polish is kept in a cold place. The difficulty with this is that this crystallization may be entirely different from the carefully controlled process which took place during manufacture. It is therefore much better to avoid such congealing altogether. The manufacturer is advised to label his product with directions to "Keep at room temperature," or "Do not store in a cold place," after which he can only hope for the best.

Both the liquid and paste forms are usually colored yellow or orange. Aniline dyes are mostly used for this. If the wax is to be used on soft wood, the polish is not only intended to make the floor appear glossy but to color it to resemble hard wood. For such a purpose, stains or pigments are used, rather than aniline dyes. These products are not ordinarily perfumed, but the practice is increasing of covering the odor of the solvent by adding a low-cost perfume such as citronella, sofrol, or compound odor.

These polishes contain two ingredients, the solvent and a wax mixture. The solvent is ordinarily petroleum naphtha and/or turpentine. There are different grades of naphtha, each having a different distillation range. A naphtha is preferable which does not have too low an initial boiling point or too high an end-point. If the boiling range is too low the product is hazardous because there is danger of explosion. In addition the solvent will evaporate so quickly that one cannot apply a film of wax over a reasonable area of floor surface. On the other hand, the disadvantage of using a naphtha with too high a boiling range is that it does not dry out quickly enough. A brilliant lustre and non-sticky surface cannot be obtained unless the solvent is completely evaporated. An interesting point in this connection is that the last of the solvent evaporates from the wax film much more slowly than it would evaporate by itself. The wax tends to hold the solvent back. In cases where the solvent does not dry out as it should, great difficulty is encountered with electric polishers, as the brushes become gummed up.

Some manufacturers buy a closely cut petroleum naphtha fraction,—meaning one that boils within a narrow temperature range. They are willing to pay a few cents a gallon more for this because they feel it is better than the usual commercial grades, in which the initial and the final boiling points are not so close together. The two solvents most commonly used are Stoddard's Solvent and Varnish Makers' and Painters' Naphtha. The former is dry-cleaner's naphtha and the latter is usually designated by the abbreviation V. M. & P. The boiling range of Stoddard's Solvent is 300 to 410° F., that of V. M. & P. 200 to 320° F. A closely cut fraction would have a difference between the initial boiling point and the end-point of from 60 to 70° F. With these special grades the boiling range falls, as a rule, between those for Stoddard's Solvent and V. M. & P.

Very often turpentine is also used in conjunction with naphtha. While we are bandying about the term "solvent," it might be well to explain that these liquids actually have very poor solvent qualities for wax. It is only at elevated temperatures that they dissolve the wax. At room temperature about 10 per cent will remain in solution. Actually turpentine is a better wax solvent than naphtha. It is easier for the manufacturer to get the wax mixture into the proper physical state of dispersion if turpentine is used in conjunction with naphtha. The reasons that the solvent cannot be all turpentine are its much greater cost and the disadvantage it has of possessing a wide boiling range.

Very few liquid waxes are as yet sold which contain non-inflammable solvents such as carbon tetrachloride. Such a solvent is of course much more expensive than naphtha. The more common chlorinated solvents have too low a boiling point and evaporate too quickly, so that there is not sufficient time for laying the film. Since all the liquids used in this type of wax have a considerable cleaning effect due to their grease-solvent properties, some manufacturers claim this as a special advantage of this type of product. However, it is difficult to see how the solvent can do any cleaning, since any material which it might dissolve will be left in the film on the floor as the solvent evaporates.

ALL good floor waxes contain carnauba wax. This is a hard, brittle wax obtained from the leaves of a Brazilian palm tree. The mass is scraped from the dried leaves, thrown into boiling water, melted and cooled. The crude product is a dark greenish brown. This is refined by treatment with sulfuric acid. The refined grades are varying shades of yellow, somewhat the color of beeswax. Carnauba wax can also be bleached white after admixture with paraffine, but this of course, modifies its properties due to the presence of the softer paraffine. Various commercial grades are known as Yellow No. 1, 2, and 3, North Country, and Chalky. The crude wax cannot be used in light yellow or white polish, because of its color. Some manufacturers use crude carnauba wax and then color their polish orange or brown Coarse dirt and similar foreign matter will settle out when this wax is melted. Yellow carnauba wax No. 1 is the best grade for use in floor wax because it is most free from dirt.

Carnauba wax is the hardest of the natural waxes. Its melting point is 183-186° F., that is, 84-86° C. and the specific gravity is 0.990-0.999. The hardness of a wax is a direct function of the melting point. The melting point is often used as an indication of the general character of a wax and as one of the criteria in identifying a wax. The solidifying point or freezing point, although theoretically the same as the melting point, is not the same in practice, due to super-cooling. The solidifying point of carnauba wax is 80-81° C. Used alone, this wax would be grainy, hard and difficult to buff. It would give ridges rather than a uniform film on the surface. In order to soften the wax and facilitate buffing, paraffine is introduced. It serves a specific purpose and cannot be considered as an adulterant, nor is its cheapness a primary consideration. Paraffine modifies the nature of the film to give it the desired properties. Refined paraffine varies in melting point from 118 to 140° F. Because of its relatively low melting point, paraffine crystallizes out first on cooling. To prevent this tendency toward crystallization or freezing, a third wax is usually added. A manufacturer of waxes recommends a special grade of ceresin which is amorphous and very plastic. This would not be suitable for use alone, but only in combination with carnauba wax and paraffine.

As well as ceresin, various other waxes are used with carnauba wax and paraffine, such as candelilla, beeswax and ozokerite. They are introduced to obtain some definite and desirable modification of the polish. If the product is too soft so that the film picks up dust readily, the content of hard wax should be increased. The film should be as hard as possible but such that it can be applied and rubbed up without too much difficulty. The usual ratio of hard to soft wax is 40 to 60 or it may be 50 to 50. The manufacturer chooses the waxes to be used, according to his own needs. The properties of the waxes most commonly used follow:

Ozokerite or earth wax is a mineral wax found in small quantities throughout the world, usually associated with rock salt or gypsum. The principal deposit occurs in the vicinity of Borgslaw in Galicia, central Europe. Ozokerite and paraffine are both closely associated with crude petroleum but are quite different in properties. Ozokerite consists largely of solid paraffine hydrocarbons and is supposed to have resulted from the evaporation and decomposition of crude petroleum. It is sold in several grades, some being soft and plastic and others brittle. The color varies from greenish brown to black. The melting point varies from 130 to 185° F. and the specific gravity from 0.850 to 0.950.

Ceresin is refined ozokerite. The latter is treated with sulfuric acid, washed and neutralized. It is further purified by filtering through bone black or Fuller's earth. The melting point is 136 to 185° F. and the specific gravity 0.850-0.950. A series of synthetic ceresin-like waxes have been prepared. These vary in melting point from the lowest of the series at about 130° to the highest at about 160° F. The color varies from yellow to orange.

Very often ceresin is grossly adulterated with paraffine. This can be readily appreciated from the different quotations of different grades of ceresin. Hard green ozokerite is currently quoted at 30 cents a pound, and pure snow-white ceresin with a melting point of 176° F. at 45 cents a pound. Other grades of ceresin range to as low as 8 cents per pound and the melting point gets down to 136° F. When you consider that paraffine is quoted at five to seven cents a pound and has a melting point of 120-140°, you can appreciate that ceresin at 8 cents cannot contain much refined ozokerite. The melting point of a mixed wax does not bear a simple relationship to the wax content. For example, a 1:1 mixture of carnauba wax and paraffine has been found to have a melting point of 169° F., while the melting point of the carnauba was was 180° F., and that of the paraffine 140° F. In general, ceresin can be rated roughly in accordance with its price. Probably a purchaser would be better off to buy a good grade of ceresin (bleached ozokerite) and add all of the paraffine as such. Some people use the term bleached ozokerite instead of ceresin in order to protect themselves against the cheaper grades of ceresin. The price should be more favorable in the end if unmixed waxes are bought rather than a product which is of uncertain composition.

Beeswax is usually offered in its crude state in varying shades of yellow. It serves as a plasticizer. Its melting point is 145 to 148° F. and the specific gravity 0.964-0.970. Bleached beeswax is sometimes known as white wax. It is used in cosmestics but very seldom if ever, in floor wax.

Candelilla wax occurs as a coating on the surface of a Mexican shrub and takes the name of the shrub, candelilla. The crude wax is dark brown and the refined product a brownish yellow, which may be translucent. It is not as hard as carnauba wax but is sometimes used as a substitute for carnauba. It is classed among the hard waxes. The melting point is 152 to 154° F., and the specific gravity 0.983. It serves as a stiffener for soft waxes.

Synthetic waxes resembling carnauba wax are produced. Their advantage lies in their freedom from impurities, of which carnauba wax may contain as high as 10 per cent. Their price is much too high for use in floor waxes. The latest available quotation is 60 cents a pound. In fact most dealers no longer quote them at all. Part of their high price is in duty as they are imported mostly from Germany.

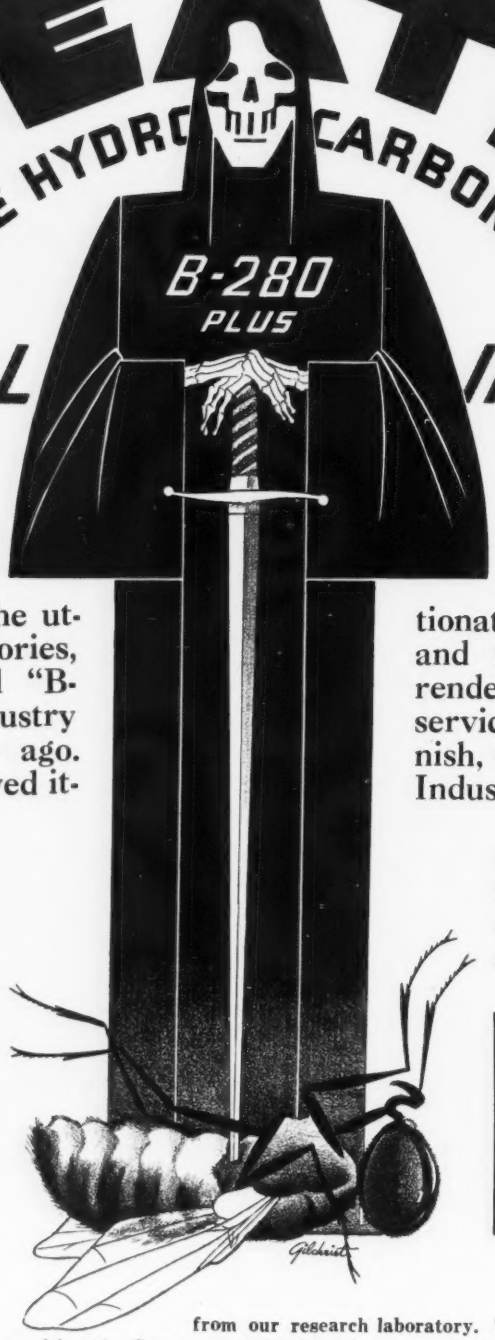
Montan wax is another form of hydrocarbon, different in physical properties from the others of this type. It always contains dirt and foreign matter, and is not used to any great extent for this reason. The melting point varies with the amount of mineral impurities present.

Some floor waxes contain small amounts of resins for the purpose of making the waxed surface less slippery

(*Turn to Page* 107)

DEATH

BASE HYDROCARBON OIL



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Scientific Advances in 1934 in
Disinfectants and Antiseptics

By DR. EMIL KLARMANN*
Chief Chemist, Lehn & Fink, Inc.

IN the preceding annual reports on the progress in the field of disinfectants and antiseptics, published during the past several years, the main attention was devoted to those papers which contained some data of fundamental significance, and therefore, could be regarded as stages in the advancement of our knowledge of this field. Little notice was given to those numerous publications and patents which, for example, dealt with mixtures of known ingredients, and did not therefore, supply any basically new information. The same procedure has been applied again in preparing the following critical review of literature published during 1934.

Methodological Investigations

H. C. Smyth, Jr.[1] carried out an investigation aiming at the determination of the most important causes of the large day-to-day variation in the resistance to phenol of cultures of Staphylococcus aureus. He found that any small deviation from prescribed experimental conditions may produce considerable differences in the results. Such deviations include differences in the concentration of the disinfectant and of the microörganisms, and also differences in temperature. A two or three hour difference in the age of the culture, or a difference of 1 degree in incubator temperature was found to be the cause of major differences in the actual resistance of the culture. The author believes that errors like these are most likely responsible for many of the day-to-day variations reported in the literature, in view of the faults of the ordinary incubators, and of the general use of uncalibrated thermometers.

A standard technique for determining the Rideal-Walker coefficient has been issued by the British Standards Institution[2]. A committee entrusted with the standardization of the testing technique have satisfied themselves that the method if followed exactly, will give concordant results in the hands of competent workers. A sub-committee is now at work, examining the Chick-Martin test with a view to its issue as a British standard.

An article by C. M. Brewer and G. A. L. Ruehle[2a] deals with the testing of pine oil disinfectants, and the differences in the results obtained in such tests, by using the F.D.A. and Rideal-Walker methods respectively. In the majority of cases, higher figures were obtained by the Rideal-Walker method. The authors found that the sodium chloride content of the medium in which the test organism is grown, exerts a marked influence on the phenol coefficient. If the salt content is the same, comparable results are obtained by both methods. As the salt content increases, the disinfectant appears to show greater killing power. This is attributed to an increase of osmosis which facilitates the passage of the toxic agent into the bacterial cell. The Rideal-Walker method specifies a high salt content for the medium; this is considered to be the cause of the higher phenol coefficients obtained by the Rideal-Walker method also in the case of certain tar oil disinfectants. Some consideration is given to the effect of soap on the germicidal efficacy of pine oil disinfectants. The authors believe that the F.D.A. test supplies a safer method for the practical evaluation than the Rideal-Walker method.

Soaps and Detergents

The bactericidal action of sodium ricinoleate was studied by H. Violle[3]. It was found that in a dilution of 1:1000, sodium ricinoleate did not affect pathogenic bacteria of the intestinal tract; it did kill streptococci, but not staphylococci.

Cornelia Burwell reported at the meeting of the American Chemical Society in Washington in 1933, that salts of certain synthetic acids, produced by the oxidation of petroleum hydrocarbons, showed powerful fungicidal properties which made these compounds potentially interesting for the therapy of certain skin diseases. A patent has been issued to A. W. Burwell[4] comprising in liquid dispersion an organic composition consisting essentially of a mixture of alkali salts of certain aliphatic monocarboxylic non-aldehydic acids, produced by the oxidation of petroleum hydrocarbons and having from 4 to 15 carbon atoms. Insecticidal, bactericidal and fungicidal action is claimed for such products.

A. R. Cade and H. O. Halvorson[5] carried out a systematic survey of germicidal compounds in order to find some which would be active in alkaline solutions. They were interested primarily in germicidal detergents suitable for use in food handling and food manufacturing industries and establishments. Many germicidal compounds were tested in solutions of high pH. It was found that under these conditions practically all the known germicidal substances were of little value. Thus, phenols and their derivatives began to lose their germicidal efficacy at a pH of about 10. The loss became very marked at a pH of 11 or 12, no doubt due to the formation of alkali salts of such phenols which show a lower germicdal power than the free compounds. The inorganic mercury salts were considered to be unsuitable because of the low solubility of their hydroxides. Hypochlorites and also such organic chlorine derivatives, as Chloramine T were not stable in distinctly alkaline solutions, or when mixed with salts of an alkaline reaction, such as trisodium phosphate and sodium metasilicate. Dyes (e.g., crystal violet) were found to be rather effective in alkaline solutions, but they were considered unreliable as general bactericides, because of their known specific action. Some soaps such as sodium oleate and sodium resinate were found to exert a favorable synergistic action on the germicidal properties of alkalies and alkaline salts. Thus, for example, a 2 per cent solution of trisodium phosphate containing from 0.1 to 0.2 per cent of sodium resinate was found to sterilize a 24 hour culture of Staphylococcus aureus in 5 minutes at 37.5°C. The authors introduced a new procedure for the testing of germicides in which the criterion of germicidal efficiency is the plate count rather than the establishment of growth or no growth in broth cultures.

E. J. Bachrach[5a] published an interesting article on soaps of naphthenic acids. The bulk of these acids is obtained in this country from the refining of certain California petroleum crudes. Unlike ordinary soaps, naphthanic acid soaps, in comparatively high concentrations, and when allowed to act for several minutes, show germicidal action against Staphylococcus aureus. These findings would seem to confer upon such soaps a potential interest

* Report by the Chairman of the Scientific Committee on Disinfectants of the National Assn. of Insecticide & Disinfectant Manufacturers, 21st Annual Meeting, New York, December, 1934.

Good News To FLIES

Seasonal Note on Pyrethrum Deterioration

It is well to bear in mind at this season of the year that from now on old crop pyrethrum flowers will begin to show marked depreciation in toxicity. We can imagine that this would contain a note of cheer for the fly population, but it certainly complicates the job of the spray manufacturer.

This important factor of seasonal depreciation must be taken into careful consideration in planning your insecticide production for the 1935 summer season. No matter what care is exercised in selection and storage of your pyrethrum, steps must be taken to counteract the effect of this natural decrease in its potency.

The best safeguard for spray manufacturers to use in this connection is to make up as much finished stock as possible now—while pyrethrum flowers are still testing well. We are still in position to offer parcels of high testing whole flowers, the strength of which is supported by certificates of reputable independent chemists.

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as antiseptic soaps, although more work on this problem appears to be necessary.

A patent for a medicated soap was granted to M. C. Taylor[6]; the mixture comprises a water-soluble detergent and a bactericidal agent, for example, an alkali metal carbonate and a stable calcium hypochlorite.

A British patent covers soaps containing metallic silver in the form of powder, foil and the like. The silver is added because of its oligodynamic action. The use of colloidal silver and of certain complex silver compounds, such as potassium silver cyanide is also referred to[7a].

Phenol Derivatives

As has been the case in the recent past, considerable activity was in evidence in this field also during 1934.

R. R. Read, G. F. Reddish and E. M. Burlingame[7] investigated the germicidal properties of chlorinated alkyl resorcinols and resorcinol mono-ethers, and found that the introduction of chlorine into the molecule of a nucleus substituted alkyl resorcinol enhances the germicidal activity to a greater extent than chlorination of a resorcinol mono-ether where the alkyl radical replaces a hydrogen atom in one of the two hydroxyl group.

Further work on the bactericidal and fungicidal action of homologous chlorophenol derivatives was carried out by E. Klarmann, V. A. Shternov and L. W. Gates[8]. In connection with this, the authors investigated also the germicidal properties of halogen free alkyl phenols, and found in this case too, the evidence of a "quasi-specific" effect. A toxicological study revealed that the monochloro alkyl phenol derivatives were generally very little toxic to mice, and that the toxicity decreased progressively with the increasing weight of the substituting alkyl chain; thus, increasing germicidal potency was found to be accompanied by decreasing toxicity. In several cases, the toxic dose could not be determined because the greatest amount of substance which could be injected was not sufficient to kill the animal.

Several patents were issued in reference to this general subject[9].

An investigation of the germicidal action of 2-chloro-2,6-dichloro-4-n-alkyl-phenol derivatives was carried out by F. F. Blicke and R. S. Stockhaus[10]. Most of the bacteriological data obtained in the case of 2-chloro-4-n-alkyl-phenols agreed with those reported by Klarmann, Shternov and Gates in a previous publication, but discrepancies were noted in connection with the hexyl and heptyl derivatives.

J. B. Niederl and C. H. Riley[11] studied the condensation of phenyl propylene with the three cresols. Phenyl thymol seemed to have been obtained in the case of meta-cresol, while in the other cases, isomers were produced. The phenol coefficient of 1-phenyl-2-(4-hydroxy-3-methylphenyl)-propane obtained from o-cresol was 59, that of the corresponding 1-phenyl-2-(2-hydroxy-5-methylphenyl)-propane from para-cresol was 82, while "phenyl thymol" which is 1-phenyl-2-(2-hydroxy-4-methylphenyl)-propane or "phenyl-isothymol", i.e., the corresponding 4-hydroxy-2-methylphenyl derivative, gave a phenol coefficient of less than 10.

S. E. Harris and W. G. Christiansen[12] prepared a number of alkyl hydroxy-diphenyl derivatives, and studied their germicidal potency. They found that alkylation of 2-hydroxy-diphenyl in the 3- or 5- position decreases the action upon typhoid germs; alkylation in the 5- position increases the effect upon Staphylococcus, while alkylation in the 3- position decreases it. The maximum effect in the series of 5-alkyl-2-hydroxy-diphenyl derivatives is shown by 3-n-propyl-2-hydroxy-diphenyl.

C. M. Suter and F. C. McKenzie[13] prepared several 2-methyl-4-hydroxy-phenyl alkyl sulfides, in continuation of previous work on this group of compounds. Of the several homologous derivatives, the propyl compound was found to be most effective against B. typhosus (phenol coefficient 23), while the amyl derivative showed the greatest efficacy against Staphylococcus aureus and Streptococcus hemolyticus (phenol coefficients 250 and 300 respectively); the latter compound shows, however, very little efficacy against B. typhosus.

Several halogen and mercury derivatives of 4-n-butyl-resorcinol were prepared by M. L. Moore, A. A. Day and C. M. Suter[14]. Their germicidal effects upon B. typhosus and Staphylococcus aureus have been determined.

In regard to chlorothymol, M. G. de Navarre[15] reports that it tends to break down in alkaline media, such as soap solutions, contrary to published statements. The author reports also that the substance is not as powerful a germicide as other investigators claim it to be.

Satisfactory results with chlorothymol were obtained by A. C. Beck[16] who used this chemical in an aqueous mixture of alcohol and glycerine in obstetrical practice. The author found that this preparation was better for the purpose stated than mercurochrome and iodine.

C. Philipp[17] obtained a patent for disinfectants containing chlorocarvacrol as the active principle.

The germicidal and other properties of amyl-m-cresol are discussed in a paper by J. K. Baker[18]. A patent covering the preparation of amyl cresols by condensation of ortho-cresol with amylene was issued to W. G. Christiansen, G. Ridge and W. A. Lott[19].

The use of halogenated o-hydroxybenzyl alcohols as antiseptics, and for other purposes, is claimed in a patent granted to F. Dunning[19a].

C. A. Cofman-Nicroesti[20] describes solid preparations containing cresol. The antiseptic properties of ortho-phenylphenol are dealt with in an article by H. C. Fuller[21].

The reduction of germicidal potency of phenol derivatives in the presence of non-aqueous solvents is the subject of a paper by L. D. Galloway[21a].

A series of 3-nitro- and 3-amino-4-hydroxy- and -alkoxy-benzoic esters was prepared and studied by T. H. Sabalitschka and K. H. Tiedge[22]. It appears generally, that nitro group increases, and the amino group decreases the germicidal action of the para-hydroxy-benzoic acid and its esters.

Distillation of cashew nut shells under atmospheric pressure and at a temperature between 300 and 400° produces a liquid which is phenolic in character, and claimed to be possessed of germicidal properties, according to a patent granted to M. I. Harvey[23].

Pine Oil Disinfectants

Some valuable information concerning the stability and the germicidal efficacy of pine oil disinfectants will be found in a paper by E. V. Romaine[24].

Hypochlorites*

Henderson, Roadhouse, and Folger[25] showed that the life of milking machine teat cup liners was approximately 33% longer when chlorine solutions having a strength of 200 ppm. were used for sterilizing as compared to their life when different methods of heat sterilization were employed.

Devereaux and Mallman[26] concluded from practical milk plant studies that hypochlorite rinse solutions with available chlorine content as low as 6 ppm. were found effective in disinfection of dairy equipment and that the Chloramine T compound used showed a delayed germicidal action which might make it objectionable as a dairy sterilizer under certain conditions.

Johns[27] reported on the effect of addition of alkali upon the germicidal power of sodium hypochlorite. In this work evidence was presented supporting the view that an alkali-hypochlorite solution designed to combine the process of washing and sterilizing is unlikely to be as effective and economical as a separate washing with alkaline de-

*The chapter on Hypochlorites has been contributed by Mr. Wm. A. Hadfield.

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tergents followed by a sterilizing treatment with hypochlorite of lower alkalinity.

Johns[28] studied the F.D.A. Litmus Milk Tube, Burri Slant and Glass Slide Methods in order to determine if a simple technique could be used that would give a satisfactory means for the comparison of the germicidal properties of various hypochlorite powders and solution as used for milk plant sterilization. The Glass Slide Method seems to be a satisfactory method for this evaluation. Johns also measured the pH of hypochlorite solution by the Glass Electrode Method and found that solutions having the lowest pH value showed the fastest germicidal activity by the Glass Slide Method, clearly indicating that the concentration of hypochlorous acid present is the active germicidal constituent.

Organic Chlorine Germicides

Azochloramid is a new germicide containing active chlorine. It has been prepared by F. C. Schmelkes and collaborators[29]. Its chemical name is N,N-dichloroazodicarbonamidine. Its outstanding property is its stability both toward physical influences such as heat, and also toward common chlorine acceptors. Thus, azochloramid is effectively germicidal in the presence of organic matter; and only compounds with strong reducing power, such as those containing sulfhydryl groups react with its chlorine. In another investigation it was found that there was no reaction between azochloramid and a series of amino acids, and little with cystine[30]. This is in striking contrast to the behavior of hypochlorite solutions.

A patent on the use of certain N-chloro derivatives as sterilzing agents, has been granted to F. C. Schmelkes[31].

Quinolor is the name of a new antiseptic whose chemical designation is chloro-hydroxyquinoline. The preparation is said to be highly germicidal[32].

Organic Peroxides

Ozonization of olive oil imparts to it bactericidal and fungicidal properties, surpassing those of sodium hypochlorite, according to T. Harada[33].

Organic Acids

The sterilizing action of unsaturated monobasic acids is the subject of a paper by S. Tetsumoto[34]. The relationship between the germicidal potency and ionization of monobasic acid was studied by D. Bach[35]. L. H. Baldinger and J. A. Nieuwland[36] prepared and studied the action of a number of homologous alpha-phenyl substituted monobasic acids, and found that the bactericidal action ascended with increasing molecular weight. However, this increase is limited by a decrease in solubility. The authors do not believe that these acids are likely to play a role as practical antiseptics, because of their disagreeable odor and because of the expense involved in their preparation.

J. B. Niederl and B. Whitman[37] report the preparation of certain synthetic derivatives of chaulmoogric acid.

Moderately concentrated solutions of tannic acids are not effectively germicidal, according to J. D. Martin and C. D. Fowler[38]; higher concentrations (10 to 20 per cent) are germicidal within 24 hours or possibly less.

Derivatives of dithiocarbamic acid are said to be possessed of bactericidal properties, according to W. H. Tisdale and I. Williams[39] who received a patent covering this principle.

Organio-Metallic Compounds

A method of preparing phenyl mercuric nitrate, a compound in which considerable interest has been shown lately, has been described by G. H. Woollett and V. A. Coulter[40]. K. E. Birkhaug recommends this chemical as an efficient pre-operative skin disinfectant on the basis of its high germicidal efficiency, low toxicity and freedom from the objectionable features of some accepted skin antiseptics such as tincture of iodine or mercurochrome[41].

Attention should be paid in this connection to a paper by F. L. Pyman and H. A. Stevenson[42] who stress the fact that the compound heretofore dealt with is really the basic salt C_6H_5HgOH, $C_6H_5HgNO_3$ while the normal salt $C_6H_5HgNO_3$ is described in their paper for the first time.

A number of organic mercury derivatives, suitable for use as disinfectants and preservatives are covered in a patent granted to F. Schoenhoefer and W. Bonrath[43]. Mercury compounds of nitro-ortho-cresols have been patented by Raiziss[44].

S. E. Harris and W. G. Christiansen[45] prepared a number of mercury derivatives of diphenol-isatin. Some of these compounds were found to show a very high germicidal potency with regard to B. typhosus. For example, acetoxy-mercuri-3,3′-dinitro-diphenol-isatin kills this microörganism in a dilution of 1:30,000. The acetoxy-mercuri-3,3′,5,5′-tetrabromo compound is effective in a dilution of 1:10,000.

A number of antiseptics, placed on the market in the comparatively recent past, among them organic mercury compounds were tested by M. L. Cohn[46] for their efficacy against tubercle bacilli. On the whole disappointing results were obtained from many of the newer preparations, while satisfactory action was obtained with 5 per cent phenol and 95 per cent ethyl alcohol.

Organo-lead phenoxides, prepared by treating certain organo-lead compounds with phenol derivatives, are the subject of a patent granted to the E. I. du Pont de Nemours & Co.[47]. These products are claimed to be useful, among other things, as disinfectants and parasiticides For example, triethyl lead phenolate is produced from tetraethyl lead and phenol.

Antiseptic Dyes

Continuing their investigation of the styryl and anil quinoline derivatives, Browning and collaborators[48] prepared a number of amino derivatives which were found to be powerfully antiseptic toward Staphylococcus and B. coli. The presence of serum produced little or no decrease in their germicidal action.

I. Ostromislensky[49] discusses the bacteriostatic action of certain azo-dyes in a recent publication. Thiazole azo-dyes are the subject of a paper by Lott and Christiansen[50]. Thiazole-azo-resorcinol and thiazole-azo-metacresol were prepared by the diazotization of aminothiazole with subsequent coupling of the diazonium salt with the respective phenols. Solutions of these two azo-dyes failed to kill B. typhosus and Staphylococcus, but they inhibited their growth in dilutions of 1:8000 and 1:16,000, respectively.

Claims advanced recently for the control of leprosy, through the treatment with various antiseptic dyes do not appear to be justified[51]. In fact, antiseptic dyes are not effective in curing or controlling this disease.

Oligodynamic Action

The sterilization of water by means of ionic silver appears to be gaining in importance. C. H. Brandes[52] reports that metallic silver, in concentrations so small as to be practically undetectable by the usual analytical methods, nevertheless exercises considerable germicidal power. The concentration required to produce this effect is of the order of a few hundredths of a milligram per liter of water. While mere contact of water with metallic silver imparts bactericidal properties to it, it is preferable to promote ionic solution of the metal by inducing an electric potential between the silver and the liquid, by means of special apparatus.

Radiation

H. J. Sears and N. Black[53] found that white petrolatum, when irradiated with ultra-violet light for 4 hours, became germicidal. This irradiation incidentally changed the color of petrolatum to a lemon-yellow. The germicidal principle is probably a non-volatile chemical substance formed by oxidation; it is not soluble in water, nor volatile with steam.

(*Turn to Page* 109)

Practical Moth Control

By DR. J. L. HORSFALL*
American Cyanamid & Chemical Corp.

THE moths referred to in the title are clothes moths. Since the species commonly causing the greatest amount of damage in our experience is the Webbing Clothes Moth, *Tineola biselliella* HUM., the discussion is largely confined to this species. It will be readily admitted that this insect continues to thrive, choosing as food our golf sweaters, furs, carpets, furniture coverings, etc., despite the fact that the housewife can easily and readily obtain remedies in increasing numbers at the stores where she ordinarily does her daily buying. It is true that some of these materials are relatively ineffective, or leave much to be desired in the line of adequate instructions for use, but many have true merit. In spite of this the Webbing Clothes Moth puts up a pretty good fight in the struggle for existence. Very few years need elapse after a new house or apartment is occupied before the moths follow, if in fact, they don't manage to move in at the same time.

As stated above many remedies, when used intelligently, are of value in practically eliminating this damage.

Destroying Infestations

Sprays with an odorless hydrocarbon base, containing an extract of pyrethrum flowers or a mixture of pyrethrum and derris, or cube extracts, are familiar to every housewife. These may contain a small amount of perfume. Within the last few years sprays have also been produced containing certain thiocynates as the active principle. The amount of pyrethrum extract may vary from one-fourth to one and one-fourth pounds of flowers per gallon. Needless to say the efficiency depends upon the spray containing an amount of extract which will be sufficient to produce lethal effects. Thanks to the efforts of members of this association, certain standards and tests have been established which have gone a long way toward assuring the housewife that effective sprays are possible of production and are being marketed. My own limited experiments have indicated that a minimum of one-half pound of pyrethrum flowers in one gallon of spray is necessary to kill the full grown larvae of the Webbing Clothes Moth.

These sprays are effective against all stages of the clothes moth with which they come in sufficient contact. Atomized in the air they kill the flying adults. Where larvae are suspected to be feeding on the underside of mohair furniture coverings, the fabric should be sufficiently wetted so that there will be assurance of the spray penetrating to the underside.

In many cases articles of furniture, furs, rugs, etc., are infested in such a manner that the only satisfactory way to check the damage is to fumigate. The articles are subjected to a gas which is toxic to all stages of moth life. The dosage, and length of exposure vary with the fumigant which is used. The articles may be fumigated in a tight atmospheric vault or vacuum chamber by a firm specially equipped to handle such work or the fumigation may be done in the home. Only the fumigants most generally used can be mentioned in this paper. Hydrocyanic Acid is used in vault and vacuum chamber fumigation. It is also used for the fumigation of entire dwellings. When so employed a dosage of eight ounces per 1000 cubic feet of Liquid HCN, or equivalent amounts of other materials such as calcium or sodium cyanide which generate HCN, are generally used. The exposure for dwellings should be about 12 hours. Fumigation with HCN should only be undertaken by persons trained to handle the product.

Ethylene dichloride-carbon tetrachloride mixture is sometimes used. In tight vaults, a dosage of 14 to 18 pounds per 1000 cube feet is recommended with an exposure of 16 to 36 hours. Carboxide, using the same exposure range, is used at the rate of 8 to 15 pounds per 1000 cubic feet. Chloropicrin has been recommended by Strand (Minn.) at the rate of 2 pounds per 1000 cubic feet.

Naphthalene and paradichlorobenzene are materials which are well adapted for use by the housewife. They have a particular place in that they may be used for the fumigation of the articles in a closely sealed chest or closet without danger to the housewife or the necessity of vacating the premises. To be effective the temperature should be above 70° F. The Insecticide Testing Section of the Food and Drug Administration, U. S. D. A., have issued, for the guidance of manufacturers, instructions for labeling of naphthalene and paradichlorobenze preparations for the control of clothes moths. These directions, agreeing closely with the dosages which have been recommended in the past by Dr. E. A. Back and others, state that one pound of crystals of either material in 100 cubic feet of space will kill moths in all stages on sufficient time of exposure. While adult moths, eggs, and young larvae are killed within two or three days with this dosage, a longer exposure is necessary to kill older larvae. These may continue feeding and cause considerable damage before they are killed. Therefore, the articles should be thoroughly brushed before they are packed away if they have not been just washed or dry-cleaned.

Thorough washing or dry-cleaning will kill moth life. Brushing and beating will usually remove or kill larvae

* Before the 21st Annual Meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., New York, Dec. 1934.

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in clothing before it is put away for the season. When articles are held in cold storage no moth life will develop during the period of storage. It is probable that eggs are killed by this exposure to low temperature. Dr. Back has shown that when articles are stored in tight chests made of heart wood of red cedar 3/4 inch thick, all newly hatched or young larvae will be killed. Cedar veneer on chests or closets is of doubtful or no value.

Preventing Moth Infestation

The foregoing discussion has related to the destruction of moth life in infested articles. None of these treatments render the articles immune to future attack. To do this the article must be treated with some material which will deposit on the fibres, compounds which render the material distasteful to the larvae as food or poisonous to them. Roark, in his very useful Index of Patented Mothproofing Materials, has listed over 600 chemical compounds which have been used or suggested for use in the preparation of such materials. Only a few of these have been developed on a commercial basis. Among these are included fluorides and fluosilicates, arsenic, and one or two complex organic compounds, sold under the trade names of Eulan, Larvex, and Konate. In the case of some of the water soluble materials the fabric may receive the mothproofing solution at the time it is dyed or in the manufacturing process. Other water solutions and naphtha solutions may be applied by the housewife to the furniture covering, rugs or clothing after it has come into the home. None of these treatments can be expected to furnish permanent protection and should be repeated each two or three years. Whenever one of these mothproofing treatments is applied to furniture or other articles known to be infested with moth life, it is always the best policy to provide that the article be fumigated before the treatment is made.

Of late years there has developed an extensive sale of containers containing paradichlorobenzene crystals, cedar oil, etc., under the name of "moth repellants" or "moth exterminators." The publication of the Insecticides Testing Section, Food and Drug Administration, U.S.D.A. states that, "Such claims as, 'Moth Repellants,' 'Drives away moths and insects'," etc., should not be made. Some of their personnel have published certain data in technical journals substantiating this stand. Professor Glenn Herrick, Cornell University, has recently published an article in which he maintains that such conclusions are not borne out by these data. On the other hand, Professor W. P. Flint, University of Illinois, has stated that "Hanging small cakes or containers of so-called moth exterminators in closets or drawers cannot be depended upon either to kill or keep out damaging insects. Neither will small amounts of paradichlorobenze gas blown through a vacuum cleaner be of value in controlling moths in furniture, rugs, draperies, and clothing." It must be remembered that all of these workers recognize the value of such materials as naphthalene and paradichlorobenzene as fumigants when used in sufficient quantities in tightly closed spaces.

Any of the methods of moth control mentioned above are of value and may be used to advantage by the housewife, particularly in a program in which several are dovetailed together. This program might include the use of moth-proofing solutions on certain articles of furniture, rugs, etc., the use of contact sprays to kill adult moths in closets and about articles of furniture when the moths are noticed, and the use of naphthalene and paradichlorobenzene in chests when clothes, blankets, etc., are packed away for a season.

If the housewife clearly understands just what may be expected from each of the different methods of moth control and uses them intelligently she should not be disappointed.

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A number of Dalmatian pyrethrum preparations from different sources were quantitatively examined for pyrethrin content by the method of Gnadinger and Corl. The insecticidal tests were carried out with a grain weevil. Only a very general relationship was found between the pyrethrin content of the preparation and the insecticidal value. Therefore the determination of the pyrethrin content of a material is not an exact measure of its insecticidal value. On standing 5 months at room temperature, the pyrethrin content of one sample was reduced from 0.553 to 0.493 per cent. At 32° C. it was reduced to 0.244 per cent. E. Profft and A. Korting. *Landw. Jahrb.* **79,** 415-30 (1934).

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Several forest insects were treated with known quantities of pyrethrum in dust form. The toxic reactions were typical of a nerve-muscle poison. Hairy larvae are more resistant to pyrethrum than smooth-skinned larvae. It is important to dust the insect at its most sensitive stage of development and under the most favorable weather conditions. Karl Goesswald. *Z. angew. Entomol.* **20,** 489-530 (1934).

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An insecticide is composed of extracts of *Quassia amara* wood, vegetable oil and rotenone. The mixture is stabilized by sassafras oil. Wetting power is obtained by adding an emulsion of oleic acid and triethanolamine. Etablissements Dupre & Cie. French Patent No. 769,-445.

Recent Advances in the Knowledge of DERRIS AND CUBE

By DR. R. C. ROARK*

MUCH evidence has been accumulated to show that rotenone is not the sole insecticidal constituent of derris root. For example, Jones et al. (Jour. Econ. Ent. 26: 451-470. 1933) found that a powdered extract of derris which contained about 25 per cent rotenone was as toxic to mosquito larvae as pure rotenone, and Campbell et al. (Soap 10 [3]: 81. 1934) found that a kerosene extract of a sample of derris from which no rotenone could be isolated was effective against house flies. It follows that toxic substances other than rotenone must be present in derris extractives. It was thought that deguelin and toxicarol might be responsible for the results just mentioned, but tests of these compounds against aphids by Davidson (Jour. Econ. Ent. 23: 877-879. 1930), against silkworms by Shepard and Campbell (Jour. Econ. Ent. 25: 142-144. 1932), and against mosquito larvae by Campbell and Sullivan (unpublished) indicate that toxicarol is practically non-toxic and that deguelin is less toxic than rotenone.

These findings, as well as toxicity tests made abroad with fish, have stimulated chemists to examine the so-called derris resins or noncrystalline constituents of derris root. As a result of recent work by the Japanese chemist Takei, Miyajima, and Ono (Ber. 66: 1826-1833. 1933) and by Haller and LaForge (Jour. Amer. Chem. Soc. 56: 2415-2419. 1934) of the U. S. Department of Agriculture, we now know that, in addition to the crystalline compounds rotenone, deguelin, tephrosin, and toxicarol, derris root contains a noncrystalline form of deguelin which is optically active, whereas the crystalline form is optically inactive.

In general, optically active compounds have greater physiological or toxic effect than their racemized optically inactive isomers. Although the insecticidal action of pure noncrystalline optically active deguelin has not yet been determined because the compound has not been isolated, it is probable that this newly discovered form of deguelin surpasses the ordinary crystalline optically inactive form of deguelin in potency and may even rival or exceed rotenone in insecticidal value. Optically active dihydrodeguelin has been isolated from hydrogenated derris extract, and tests by D. E. Fink against mosquito larvae (unpublished) show that it is much more toxic than the inactive form and even more toxic than rotenone.

There is evidence, also, that tephrosin does not exist in the root, but is formed from deguelin by atmospheric oxidation. The conversion of deguelin to tephrosin and the analogous conversion of rotenone to rotenolones takes place with great rapidity, especially in alkaline solution, and the fact that the products formed are relatively nontoxic offers an explanation of the rapid loss in toxic action under these conditions.

Chemical Assay of Derris: Gross and Smith (Jour. Assoc. Off. Agr. Chem. 17: 336-339. 1934) have devised a new colorimetric method for assaying derris and other rotenone-bearing products. To 2 cc. of an acetone solution containing 0.05 to 0.30 mg. rotenone per cc., 2 cc. of alcoholic potassium hydroxide solution (10 grams KOH + 100 cc. 95 per cent C_2H_5OH) are added, mixed, and heated at 20°C. (68° F.) for exactly 2 minutes. Then 6 cc. of nitric acid-sodium nitrite reagent (made by mixing 1 volume of C. P. HNO_3 with 1 volume of aqueous $NaNO_2$ solution containing 0.25 gram $NaNO_2$ per liter) are added, mixed, cooled to 20° C., and allowed to stand in the water bath for 15 minutes. A red color develops, which can be compared with standards. So far as is known, deguelin is the only natural product besides rotenone that gives this color. Because the Gross-Smith method estimates deguelin as well as rotenone, it gives a better indication of the insecticidal value of rotenone-bearing plants than does the determination of rotenone alone. In a recent study of relationships between chemical composition and insecticidal value of rotenone-bearing plants, H. A. Jones, F. L. Campbell, and W. N. Sullivan found certain methods of assay more promising than that of Gross and Smith. The results of this work will be published soon and should lead to the adoption of a method that would enable those dealing in derris to buy and sell it on a more equitable and scientific basis. Takei and associates (Sci. Papers Inst. Phys. Chem. Res. (Tokyo) 24 (494): 1-24. 1934) report finding more deguelin than rotenone in derris root, and they describe a method for determining rotenone and deguelin in derris root by converting these compounds to their dehydro derivatives. Other methods appear to be simpler and quicker.

Dihydrorotenone: By the action of hydrogen on rotenone in the presence of a catalyst, dihydrorotenone is formed. Haller and Schaffer (U. S. Patent 1,945,312, issued Jan. 30, 1934) have patented a process for making this derivative with use of the Rainey nickel catalyst. A good yield is obtained and the process is inexpensive and should prove economically feasible.

The significance of this development is apparent when it is remembered that dihydrorotenone is more toxic than rotenone to fish (Gersdorff, Jour. Amer. Chem. Soc. 52:

* Before 21st Annual Meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., New York, Dec. 1934. Dr. Roark is chief of Insecticide Division, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington.

5051-5056. 1930) and to mosquito larvae (Jones et al., loc. cit.). It is more stable than rotenone to direct sunlight, and its use in admixture with the pyrethrins avoids the patent covering mixtures of rotenone with the pyrethrins. As mentioned above, optically active dihydrodeguelin is even more potent than rotenone. The writer believes that hydrogenated extracts of rotenone-bearing plants have a distinct field of usefulness as insecticides.

Stabilized Rotenone: Much research is under way to find materials and processes for protecting rotenone against decomposition by direct light in the presence of air. It has been stated (Soap 10 (2): 87. 1934) that patents have been filed covering a new stabilized liquid extract of rotenone. The problem of stabilizing thin films of dry rotenone deposited from a spray on foliage is, however, a much more difficult one than that of stabilizing a rotenone solution. As yet no stabilized rotenone product is commercially available, but a large market awaits such a product.

Statistics of Derris and Cube: Available figures show that the growing of derris and cube and world trade in these materials are rapidly increasing. During 1933, 1,438,000 pounds of derris root were exported from Malaya as compared with only 201,000 pounds in 1930. Much derris has been planted in Malaya, and within the next two years the supplies available for export are expected to be much larger than at present. (U. S. Dept. Com. Bur. Foreign and Dom. Com., World Trade Notes on Chemicals and Allied Products 8 (21): 4. 1934).

In Ceylon (Bull. Imp. Inst. [London] 31 (4): 574. 1934) attempts have been made to grow derris but with little success. In the Philippines (Adriano, Philippine Jour. Agr. 5: 1-13. 1934) derris has attracted much attention. Twelve species are found in the islands and the rotenone content of certain of these has been found to range from 0.02 to 1.68 per cent on a moisture-free basis. A large derris plantation is under cultivation by one of the sugar companies at Canlubang, Laguna.

Dutch derris root formerly had the reputation of containing little or no rotenone. Koolhaas (Econ. Weekblad Nederlandsch. Indie 3: 154-158. 1934), however, has reported that Dutch roots with as much as 12.6 per cent rotenone have been found. Thirty-two samples of derris root ranged from 0.3 to 10.9 per cent rotenone (average about 3 per cent) on a moisture-free basis. The experiment stations in Java and Sumatra are endeavoring to select derris of very high rotenone content for planting in the Dutch East Indies.

Regarding cube little has been published during the past year, but extensive plantings of this root have been made in Brazil, British Guiana, and Peru. McKee, American vice-consul in Callao-Lima, Peru, under date of May 8, 1934, advised that a total of 351,000 pounds of cube was exported from Peru during the first 4 months of 1934, whereas only 35,380 pounds was exported during all of 1933. Shipments of "timbo" (the Brazilian name for cube) have also been made in increasing amounts. At present (November, 1934) cube is cheaper than derris on the New York market, being quoted at 8 cents a pound as compared with 30 cents a pound for derris. These quotations are for crude unground root of 4 per cent rotenone content.

Other Rotenone-Bearing Plants: In Mysore India (Mysore Agr. Calendar 1934, p. 41) the Agricultural Department is experimenting with *Mundulea suberosa*, the bark of which contains rotenone, and in East Africa (East African Agr. Res. Sta. Amani, Ann. Rept. 5, 1932-33, pp. 11-12) *Tephrosia vogelii* is being cultivated. This plant is known to contain deguelin, a constituent also of derris and cube roots.

Relative Insecticidal Value of Derris and Cube: No data concerning exact comparisons of the toxicity of derris and cube have been published. It appears pretty well established that, for a given rotenone content, derris contains, in general, larger quantities of other extractives than does cube, and since these extractives are toxic, the derris will in general be the more toxic. Some unpublished work by H. A. Jones, F. L. Campbell, and W. N. Sullivan indicates that if both the rotenone content and the total extractive content of derris and cube are nearly equal, there will be very little, if any, difference in toxicity. As this indication is based on a comparison of only two pairs of samples, no general conclusions can be drawn as yet.

Insects Controlled with Derris: Excellent results against the European pine shoot moth (Jour. Econ. Ent. 27: 334-336. 1934), the potato flea beetle (Jour. Econ. Ent. 27: 102-106. 1934), the American raspberry beetle and the raspberry sawfly (Mich. Agr. Expt. Sta. Quarterly Bull. 16: 183-185. 1934), the eggs and the newly hatched larvae of the apple fruit miner (Jour. South Eastern Agr. Coll. Wye 34: 87-92. 1934), and the harlequin bug (U. S. Dept. Agr. Farmers' Bull. 1712, 10 pp. 1933) have been reported by various workers.

One of the most promising uses for derris is for the control of pests of cabbage, cauliflower, and broccoli. Huckett (Jour. Econ. Ent. 27: 156-161. 1934) has reported on the control of cabbage insects attacking early cauliflower and cabbage on Long Island. Dusts of 0.5 to 1 per cent rotenone applied four times at about 2-week intervals during a 10-week period of infestation gave satisfactory results for the control of cabbage worms. During 1933 about 300,000 pounds of ready-prepared derris dusts were sold by dealers on Long Island as substitutes for the arsenicals. Derris dusts were used to protect 4,000 acres of late cauliflower on Long Island against cabbage worms.

Hervey and Palm (N. Y. Agr. Expt. Sta. (Geneva) Bull. 640, 17 pp. 1934) report favorable results in the control of the imported cabbage worm, the cabbage looper, and the diamond back moth by the use of derris. The powdered derris root was diluted with talc to give 0.5 per cent and 1 per cent rotenone, and both these mixtures appeared in general about equal in effectiveness. On cauliflower, derris dusts should be applied at the rate of 25 or 30 pounds per acre. Two applications about 3 weeks apart gave adequate protection.

(*Turn to Page* 105)

WAXES FOR HOSPITAL FLOORS

A study of the use of wax polishes on various types of hospital floors was reported in the January issue of *Modern Hospital*. This report stated: "Because hospital floors must be clean and well polished the use of waxes of different kinds has come into general use. A difficulty lies in the fact that each type of flooring calls for a different type of wax, and neither the sales staff of the wax companies nor the superintendent of the hospital has exact data on which wax to use on which floor in order to secure the best results.

The Fellows in Hospital Administration of the University of Chicago Clinics have been working on this problem for some time and to date have reached the following general conclusions:

For linoleum, wax, in either paste or liquid form, that contains benzine, turpentine or similar solvents seems to be entirely satisfactory. The degree of polish and the degree of slipperiness that may be permitted will be governing factors in determining which wax to use. In general, waxes that contain a high percentage of beeswax are less slippery and take a higher polish than waxes containing a higher percentage of carnauba. Therefore, the relative quantity of beeswax and carnauba wax will tend to indicate the degree of slipperiness and the degree of polish that may be obtained.

For mastic floors, a combination of beeswax and carnauba with the beswax making up the bulk of the material gives a good looking finish without being slippery.

In general, terrazzo floors tend to become so slippery from waxing that this procedure produces an unnecessary and dangerous risk.

The most difficult floor to handle is the rubber floor. Because of the nature of the solvent (turpentine, benzine, etc.), ordinary wax tends to accelerate the disintegration of the rubber. This difficulty has been partially solved by water waxes, which give an excellent finish to rubber flooring and do not accelerate the disintegration. The difficulty lies in the fact that water waxes are water solvent and tend to water spot. If the rubber floors are light in color, water spotting is not so objectionable but on dark green rubber floors every little water spot becomes noticeable.

After considerable study and experiment, one hospital hit upon the obvious solution to the problem. First, the rubber floors to be waxed were scrubbed clean. Then two coats of water wax were applied. On top of the water wax was applied a heavy coat of one of the standard waxes containing solvents known to be harmful to the rubber flooring. The undercoating of the water wax adequately protected the rubber and the heavy upper coating of standard wax gave the necessary protection."

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Monsanto Chemical Company, St. Louis, have issued a new edition of their booklet describing Monsanto Chemicals. The new booklet lists 351 separate items and gives a complete directory of district offices and plants as well as photographs of the latter. Copies are available on request.

TESTING INSECTICIDE POWDERS

New methods for the biological evaluation of pyrethrum powder and pyrethrum preparations have been described. Method I calls for a smooth-walled chamber which contains a determined number of test insects. A weighed quantity of the powder is blown in. The dust particles soon settle. Two minutes after applying the dust, the bottom of the chamber is covered with a large piece of paper. The method is suitable for mosquitoes and biting and sucking flies. Method II requires a glass bell jar into which measured amounts of the powder are puffed. It is suitable for testing insects and certain small invertebrates which live on the ground. In method III, the small stickleback fish is the test animal. Small glass aquaria are filled with water and a weighed quantity of the powder strewed on the surface of the water. After an hour, the sticklebacks are placed in these containers. The temperature is 15 to 18° C. Heinrick Kemper. *Z. angew. Entomol.* **21**, 208-23 (1934).

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Dr. Robert C. White, Robert C. White Co., Falls of Schuykill, Pa., was honored by his fellow members in the Penn Athletic Club, Philadelphia, at a testimonial dinner held in the club, January 29th. Dr. White, who is a member of the board of directors of the National Association of Insecticide and Disinfectant Manufacturers and chairman of the Code Authority of the industry, added to his many duties some time ago by accepting the executive directorship of the Penn Athletic Club in which position he has been serving without pay. He has made a remarkably fine record in turning an operating deficit into a profit during his stewardship.

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Fuld Brothers, Baltimore, manufacturers of sanitary specialties for the jobbing trade, have issued a new forty page catalog for 1935. Sixteen new products, including opaque color treatments for floors, new specific killers for rats and ants, and several new dispensers and containers are mentioned along with 153 other items which are of interest to jobbers and repackers. Copies of the catalog are available upon request.

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Among those in the insecticide and disinfectant industry visiting in the South at the present time are included Charles P. McCormick of McCormick & Co., Baltimore, president of the National Association of Insecticide & Disinfectant Manufacturers, who is on a trip through the Southern States. C. Campbell Baird, president of Baird & McGuire, Holbrook, Mass., is spending February in Florida. Henry A. Nelson, vice-president of the Chemical Supply Co., Cleveland, spent the month of January in Florida.

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W. F. Leary, Wm. Allison & Co., New York, was elected president of the New York Wax Importers' Association at the annual meeting, held January 15 at the New York Athletic Club.

Rough Water Ahead!

ALREADY the work of the National Association of Insecticide & Disinfectant Manufacturers for 1935 is well under way. Circumstances are such that 1935 is bound to be a year of unusual activity. Committees have been appointed and already several of the more important ones are functioning. This is especially true of the Legislative Committee and the Membership Committee.

This year more than ever those firms in the insecticide, disinfectant, and allied industries are going to need the help of their trade association. The prestige and influence of a trade association in aiding an individual manufacturer or a local group of manufacturers who may find themselves in a "jam," is worth many times the cost of the annual dues. To those firms which are not members of the Association, may I extend a personal invitation to find out just how the organization can be of service, particularly in the light of the problems which we are all facing this year.

C. P. McCORMICK,
President, Nat'l Ass'n of Insecticide
& Disinfectant Manufacturers.

In laboratory experiments on the control of migratory locusts which attack sugar cane, it was found that the young locusts were effectively controlled by spraying with aqueous solutions of cheap laundry soap. A. W. Lopez. Ann. Rept. Director Research, Philippine Sugar Assoc.

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Solutions of derris extract and of hellebore powder in molasses leave toxic and fairly stable deposits when used in the control of the gladiolus thrips. Henry H. Richardson. *J. Agr. Research* **49,** 359-73 (1934).

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SET EXTERMINATORS' CONVENTION DATE

The annual convention of the National Association of Exterminators and Fumigators will be held this year in Detroit, October 14-16. Norman C. Dold, 208 North Wabash Ave., Chicago, is convention chairman. A recent bulletin of the organization mailed by secretary William O. Buettner suggests a proposed cost finding form for use by the industry in estimating on jobs. It is pointed out that general use of some such standard form would insure members of the industry taking into account all the various cost factors on a job in making their quotations, and could be expected to lessen the tendency to simply take a competitor's price as the starting point in figuring one's own quotation. The suggestion is also included in the bulletin that it would be worth while for the industry to make some attempt to arrive at a standard contract or agreement form. To this end it is requested that firms submit their standard forms to the secretary for study by the committee on public relations and research, consisting of E. H. Arnett, chairman, A. S. Krawcheck, William O. Buettner, P. Calvert Cissel, and John Greene.

ROCHESTER GERMICIDE ELECTS CALKINS

D. L. Calkins, for many years general manager of the Rochester Germicide Co., Rochester, N. Y., has been chosen president of that company to succeed George Ford who becomes chairman of the board of directors.

D. L. Calkins

W. B. Eddy

W. S. Calkins has been elected secretary and treasurer. W. B. Eddy, for some years past, sales manager, has been advanced to the position of general manager. The Rochester Germicide Co. is almost fifty years old, having been established in 1888. Mr. Eddy is first vice-president of the National Association of Insecticide & Disinfectant Manufacturers, and also a member of the Code Authority of the industry.

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PENICK ADDS NEW PYRETHRUM PLANT

S. B. Penick & Co., New York, has purchased a plant at 4 Ash Street, Jersey City, N. J., and equipped it to provide for the company's increasing business in pyrethrum products. For the past ten years the company has been operating a large plant at Weehawken, N. J., with approximately two acres of floor space, but recent increases in business have made further expansion in production capacity necessary. The new plant is well equipped with railroad sidings, shipping facilities, storage space, and a battery of high pressure boilers. It is a corner property so located as to provide for expansion in manufacturing operations for some time to come.

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The National Research Council, Ottawa, Canada is interested in locating the name of the manufacturer of the moth proofing material, "Morto Moth," which is understood to be made in Milwaukee. Any information on this product or its maker will be appreciated by C. H. Bayley of the National Research Council.

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A new radio program, starring Eddie Cantor, was inaugurated by Lehn & Fink, Inc., Bloomfield, N. J., February 3. "Pebeco" tooth paste and powder are advertised.

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Rex Research Corp., Toledo, has recently added another new product to its line, "R.R.C. Drain Opener".

NEW EXTERMINATION LAW FOR N. J.

A new proposed law for the State of New Jersey covering fumigating and exterminating, and requiring the licensing of all exterminators and fumigators, and their employes, was introduced in the Legislature in Trenton on January 28. The act is being sponsored by the New Jersey State Health Officers Association and is modeled in many respects after the present law in effect in New York City. It restricts the use by owners of property of poisonous or highly toxic insecticides in any place of business where food is stored, prepared, held or kept for sale. The act calls for written and oral examination for licenses by a Fumigant Board composed of members of the Department of Health of the State of New Jersey. Every business must furnish proof of public liability insurance or a bond in the amount of $10,000 before a license to conduct business will be issued. Employes of businesses must also be covered by liability insurance according to the state workmen's compensation act. The bill also outlines the method of labeling fluoride products as "highly toxic" and also provides for blue coloring. A license fee of $50 is required for each firm, and $5 per employe for fumigators and $3 each for exterminators.

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A summary of state and federal legislation affecting insecticides, disinfectants, etc., was sent out to the membership of the National Association of Insecticide & Disinfectant Manufacturers from the office of the secretary.

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Derris root ground and compressed into blocks under 240 atmospheres pressure retained its rotenone content practically unaltered for a year. D. R. Koolhaas and W. Spoon. *Indische Mercuur* **57**, 631-2 (1934).

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DERRIS AND CUBE

(From Page 99)

White (U. S. Dept. Agr., Bur. Ent. Plant Quar., Mimeo. pamphlet E-309, Aug. 19, 1933, 14 pp.) has reported that derris powder is more effective against cabbage worms than calcium arsenate, Paris green, lead arsenate, pyrethrum, or hellebore. It has a residual action which pyrethrum dust does not have. The effective dosage is from 3 to 6 pounds mixed with an equal quantity of tobacco dust.

Patents: The most interesting recent patent in this field is U. S. Patent 1,967,024, issued on July 17, 1934, to S. C. Fulton, and assigned to Stanco, Inc. Claim 2 of this patent reads as follows: "An insecticide comprising pyrethrins and rotenone." This appears to cover all possible mixtures of derris and pyrethrum powders or extracts. Campbell and associates (Soap 10 (3): 81, and (4): 83, 1934) have shown that pyrethrum extracts are more effective in paralyzing house flies but that derris extracts are more effective in killing them, and point out that obviously the best features of kerosene extracts of pyrethrum and of derris may be com-

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ATLANTIC ULTRASENE

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Further information and a working sample will be gladly furnished upon request. The Atlantic Refining Company, Specialty Sales Department, 260 South Broad Street, Philadelphia, Pa.

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Muriatic Acid	Aluminum Chloride
Monochlorbenzene	Antimony Trichloride
Ortho-dichlorbenzene	Arsenic Trichloride
Para-dichlorbenzene	Tin Tetrachloride
Trichlorbenzene	Ferric Chloride
Tetrachlorbenzine	Ferrous Chloride
Hexachlorbenzene	Sulfur Monochloride
Sodium Benzoate	Sulfur Dichloride
Ammonium Benzoate	Sulfuryl Chloride
Benzoic Acid	Thionyl Chloride
Benzoic Anhydride	Acetyl Chloride
Benzoyl Chloride	Furoyl Chloride
Meta Nitrobenzoyl Chloride	Isopropyl Chloride
	Propionyl Chloride
Para-nitrobenzoyl Chloride	Alpha-Chlornaphthalene
	Chlorinated Paraffin
Benzyl Chloride	Special Salt
Benzal Chloride	Hydrogen

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Plant—Tacoma, Washington
Sales Office—Tacoma, Washington

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bined by mixing them. Other recent patents describe methods of dispersing rotenone in water (H. A. Jones. U. S. Patents 1,928,256, issued Sept. 26, 1933, and 1,928,968, issued Oct. 3, 1933); of extracting derris and cube with a petroleum hydrocarbon (D. H. Grant. U. S. Patent 1,940,646, issued Dec. 19, 1933, assigned to the Standard Oil Development Co.); of preparing rotenone-carbon tetrachloride solvate (H. A. Jones. U. S. Patent 1,942,104, issued Jan. 2, 1934); and of preparing moth-proofing solutions with a chlorinated hydrocarbon extract of cube (E. W. Adams. Canadian Patent 338,896, issued Jan. 23, 1934, assigned to the Standard Oil Co.) or with a petroleum naphtha (W. J. McGill. Canadian Patent 338,897, issued Jan. 23, 1934, assigned to the Standard Oil Co.).

Patents have been issued covering an insect repellant comprising petroleum white oil, derris or cube extract, and an emulsifying agent (D. H. Grant. U. S. Patent 1,934,057, issued Nov. 7, 1933, assigned to the Standard Oil Development Co.) and an insecticidal powder consisting of talc impregnated with pyrethrum extract mixed with ground cube or derris root (A. E. Badertscher. U. S. Patent 1,940,899, issued Dec. 26, 1933).

FLOOR WAXES

(*From Page 85*)

without making it soft or sticky. A slippery floor is a serious problem in public buildings. The use of resins helps a little, but there is probably *no such thing as a sure skid-proof waxed surface.* The resins used must be such that they are soluble in the liquid phase. Both rosin and natural and synthetic resins have been tried with a greater or lesser degree of success.

Although various waxes are present in the final product and these freeze out at different temperatures, paraffine first, there should be no segregation of one particular wax. If the product has been properly made and the particle size is very small, no segregation will occur. Sometimes the surface will appear very smooth but the film will have a center core which may be very soft. Such a condition can only be remedied by changing the manufacturing process or sometimes, the composition. An advantage of a volatile solvent wax over a water base wax is that the former may be suitable for use on furniture, while the latter generally is not. The volatile solvent wax has the disadvantage of being inflammable and it is occasionally barred for this reason. However, there is no doubt that the greatest point of difference is the labor required in buffing the solvent type of wax, whether it be by hand or machine. This factor alone has probably accounted more than any other for the rise of the self-polishing wax emulsions over the past few years.

NOTE:—*The second article of this series by Dr. Tyler, covering water emulsion floor waxes will be published in the next issue of* SOAP.

CHANGES IN I & D ASSN. COMMITTEES

Changes in committee personnel of the National Association of Insecticide & Disinfectant Manufacturers as published have been announced by Charles P. McCormick of McCormick & Co., Baltimore, president of the Association. Dr. William Dreyfus of West Disinfecting Co. finds it impossible to serve on the Disinfectant Standardization Committee. Dr. H. D. Pease of Pease Laboratories will serve in his place. In place of the name of Carl Seiffe of the Zonite Products Corp., Chicago, on the Program Committee, that of R. P. Neptun of Allaire-Woodward & Co., Peoria, should appear. Dr. C. L. Black of the Vick Chemical Co. will serve as an additional member of the Legislative Committee.

The name of Melvin Fuld of Fuld Brothers, Baltimore, should have appeared as a member of the Committee on Sanitary Specialties, and was omitted through typographical error. That of J. L. Brenn of the Huntington Laboratories, Huntington, Ind., should appear as a member of the Sanitary Supply Sales Committee instead of as a member of the Sanitary Specialties Committee.

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A bill introduced in the Texas legislature to regulate the sale of insecticides and fungicides, including household insecticides, requires a registration fee of fifteen dollars per year for each insecticide or fungicide product sold in that state, in addition to various label statements. It is understood that the bill has been laid aside at least temporarily, according to a report from Austin, Tex.

DISINFECTANTS AND ANTISEPTICS

(*From Page 91*)

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COMING!

If you are interested in the manufacture, properties and uses of water emulsion floor waxes, do not miss the second article of the series on "FLOOR WAXES" by Dr. C. A. Tyler, which will be published in the next issue of SOAP. The article deals exclusively with the so-called water waxes, the best practical contribution on this subject which has yet been written.

Good USED MACHINERY *for* SOAP MANUFACTURERS

H-A 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
Ralston Automatic Soap Presses.
Scouring Soap Presses.
2, 3, 4, 5 and 6 roll Granite Toilet Soap Mill.
H-A 4 and 5 roll Steel Mills.
H-A Automatic and Hand-Powered slabbers.
Proctor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder Mills.
J. H. Day Jaw Soap Crusher.
H-A 6, 8, and 10 inch Single Screw Plodders.
Allbright-Nell 10 inch Plodders.
Steel Soap frames, all sizes.
Steam Jacketed Soap Remelters.
Automatic Soap Wrapping Machines.
Glycerin Evaporators, Pumps.
Proctor & Schwartz large roll Soap Chip Dryers complete.
Doll Steam Jacketed Soap Crutchers, 1000, 2000 and 1350 lbs. capacity.
Ralston and H-A Automatic Cutting Tables.
Soap Dies for Foot and Automatic Presses.
Broughton Soap Powder Mixers.
Williams Crutcher and Pulverizer.

Good USED MACHINERY *for* Sanitary Product Manufacturers

Empire State, Dopp & Crosby Para Presses.

Filling and Weighting Machines for Flakes, Powders, etc.

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.

Perrin 18 inch Filter Press with Jacketed Plates.

Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.

Day Grinding and Sifting Machinery.

Schultz-O'Neill Mills.

Day Pony Mixers.

Gardiner Sifter and Mixer.

Day Talcum Powder Mixers.

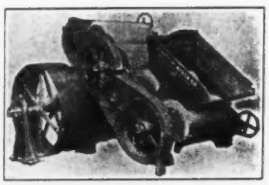
All types and sizes—Tanks and Kettles.

National Filling and Weighing Machines.

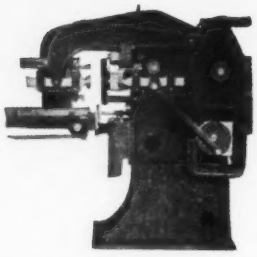
New SOAP CRUTCHERS

This Newman brand new, all steel steam jacketed soap crutcher. Will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap in addition to other new soap machinery such as frames, cutting tables, etc. Send for complete list.

Used *Specials!*



H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



4 JONES AUTOMATIC
combination laundry and toilet soap presses. All complete and in perfect condition.

All used equipment rebuilt in our own shops and guaranteed first class condition.

Send us a list your surplus equipment—we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY 1051 W. 35th St. CHICAGO

Our Forty Years Soap Experience Can Help Solve Your Problems

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 136 Liberty St., New York.

Note: All advertisements must be in publisher's hands by the first of the month for that month's issue.

Positions Wanted

Chemist and Soapmaker—Young, married, wants new permanent connection. Experienced in equipment installation, manufacture and control of soap, soap powder, industrial and household cleaners. References furnished. Address Box No. 502, care *Soap*.

Chemist—with long experience and broad knowledge of the soap business, seeks change. Address Box No. 503, care *Soap*.

Insecticides—plant superintendent and chemist who has had twenty years' experience in manufacturing insecticides and ten years' experience with biological and chemical control of leading fly spray manufacturer, seeks new connection. Highest references. Address Box No. 505, care *Soap*.

Soapmaker and Chemist—Thoroughly familiar with the manufacture of laundry, textile and toilet soaps, soap powders, etc., and having ample experience in oil and fat refining, glycerine recovery, analytical work, seeks permanent connection with progressive concern. Address Box No. 512, care *Soap*.

Superintendent and Soapmaker—Can make and analyze all kinds of soap and soap material. Address Box No. 511, care *Soap*.

Soapmaker—26 years' experience laundry and toilet soaps. Capable of handling any kettle department. Address Box No. 483, care *Soap*.

Chemist—Soap Maker—15 years' experience textile laundry soaps, soap powders, glycerine recovery. Address Box No. 495, care *Soap*.

Factory Superintendent — twelve years' experience nationally known hand soap company, full charge production, purchasing all materials. Immediate connection desired. Address Box No. 492, care *Soap*.

POSITIONS OPEN

Wanted—Salesman experienced in the selling of cleaning and maintenance supplies to large consumers such as, theatres, office buildings, apartment houses, hotels, chain restaurants. Product well known in the market for over 50 years. Salary and commission. Address Box No. 485, care *Soap.*

Soapmaker—Experienced in laundry chip oil and bar soaps; full knowledge of kettle room; Chicago district; Give age, experience, and salary wanted; Steady employment for a man of initiative and not afraid to work. Address Box No. 501, care *Soap.*

A Prominent Manufacturer of liquid soaps, disinfectants, deodorizing cakes, etc., has an opening for a dependable sales representative. Address Box No. 504, care *Soap.*

Want to represent large soap and detergent manufacturer as agent in Philadelphia. Have contact with consumers. Address Box No. 507, care *Soap.*

Miscellaneous

Mfrs. Attention—A 1 Formulas for sale; royalty basis. Automobile Polish (liquid); Metal Polish; Automobile Surface Cleaning Solution; Weatherproof Top Dressing, etc. Write, Chemist, 50 W. 112th St., New York, N. Y.

Wanted—Jumbo Plodder, ten or twelve inches and one slab chipper. Address Box No. 510, care *Soap.*

Wanted—Another foot power para press, good condition; Houchin preferred. Give full details. Spic & Span Co., 420 Villita St., San Antonio, Tex.

Rats—Chase them out with Pasler's Rat Chaser. Trade Mark Registered. Trial package fifty cents. Joe Pasler, Bryan, Texas.

For Sale—4 1,000-gal. Round Open Top Copper Evaporating Pans, Steam Coils; 2 500-gal. Steam Jacketed, Glass lined, Agitated Vats. Industrial Materials Company, Houston, Texas.

Soap Plant — Large modern factory, fully equipped, located in East, for sale. Will rent to responsible firm or individual. Address Box No. 472, care *Soap.*

The oil brokerage business of the late Edgar H. Laing has been taken over by his associate, F. W. Dickau, New York. Soap making oils will be handled, as well as cod oil.

FRITZSCHE BROS. ISSUE STATEMENT

In regard to the recent termination of a sales agency relationship in the United States between Fritzsche Brothers, Inc., New York, and Schimmel & Co., Miltitz, Germany, Fritzsche Brothers have sent out the following statement to the trade:

"Fritzsche Brothers, Inc., who recently announced the termination of their exclusive sales agency relationship with Schimmel & Co. A. G. of Miltitz near Leipzig, Germany, have sent out to their customers a notice intended to correct the false impression created by the fact that Schimmel & Co., Inc., recently formed in this country, carries rather prominently on its price list the name of 'H. Fritzsche, President.'

This notice points out that Mr. Herman Fritzsche has never been connected with Fritzsche Brothers, Inc., in any capacity at any time and that there have been absolutely no changes in the organization of Fritzsche Brothers, Inc., as a result of the termination of their Schimmel & Company sales agency. They point out furthermore, that no one from the Fritzsche Brothers organization is at present connected with Schimmel & Company, Inc., of New York.

Fritzsche Brothers, Inc., since its purchase by Mr. F. E. Watermeyer and subsequent incorporation in 1919, has been an entirely independent firm with its own laboratories, manufacturing facilities and direct sources of supply. It acted for Schimmel & Company merely as a sales representative for the latter's products and will continue to supply these products to any of its customers who continue to require them."

—♦—

Givaudan-Delawanna, Inc., New York, advise us of the formation of Givaudan-Virginia, Inc., Charleston, W. Va. Two large experimental laboratories have been set up by the subsidiary company and are now operating. The establishment of the new unit is in line with the company's forward looking policy of anticipating future developments. It is indicated that at some future date the company's entire manufacturing activities may be shifted from the present plant at Delawanna, N. J., to the new experimental plant.

—♦—

George Silver Import Co., New York, essential oils and aromatics, moved into new and much larger quarters at 351 Fourth Ave., New York, early in February. Albert Delavigne heads the company which acts as American agent for Etablissements Roure Bertrand Fils & Justin Dupont.

—♦—

It was reported in error in the January issue of SOAP that the O-B Soap Company had moved to 1750 Main Street, Buffalo. The company is in reality located at 204 Chester Street and has not been at the Main Street address since June, 1933.

—♦—

The new Lake Charles, La., plant of Mathieson Alkali Works was formerly placed in operation January 28th.

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 122, for page numbers. *"Say you saw it in SOAP."*

ALKALIES

Columbia Alkali Co.
Dow Chemical Co.
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Stauffer Chemical Co.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
A. C. Drury & Co.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Merck & Co.
Monsanto Chemical Co.
Naugatuck Chemical Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

BULK AND PRIVATE BRAND PRODUCTS

An-Fo Manufacturing Co.
Baird & McGuire, Inc.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Fuld Bros.
Harley Soap Co.
Hysan Products Co.
Hull Co.
Koppers Products Co.
Kranich Soap Co.
New York Soap Corp.
Palmer Products
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
Bowker Chemical Co.
Columbia Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Innis, Speiden & Co.
Mechling Bros. Chemical Co.
Merck & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Stauffer Chemical Co.
Swann Chemical Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Products Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

CONTAINERS

Anchor Cap & Closure Corp. (Tubes & Bottles)
Cin-Made Corp. (Paper Cans)
Continental Can Co. (Tin Cans)
Maryland Glass Corp. (Bottles)
Metal Package Corp. (Tin Cans)
Owens-Illinois Glass Co. (Bottles, Pails and Drums)
Wilson & Bennett Mfg. Co. (Steel)

DEODORIZING BLOCK HOLDERS

Cin-Made Corp. (Paper)
Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Hysan Products Co.
Palmer Products, Inc.

ESSENTIAL OILS

Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
A. C. Drury & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

(*Continued from page* 120)

PROFESSIONAL DIRECTORY

RAW MATERIAL AND EQUIPMENT GUIDE

(*Continued from page* 118)

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 122, for page numbers. *"Say you saw it in SOAP."*

MACHINERY

Blanchard Machine Co. (Soap Powder)
Ertel Engineering Corp. (Filters, Mixers, Bottle Fillers)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Package Machinery Co. (Packaging)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
Triangle Package Machinery Co.
U. S. Bottlers Machinery Co. (Bottle Filling and Cleaning)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.

MISCELLANEOUS

Anchor Cap & Closure Corp. (Metal Caps)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)

OILS AND FATS

Industrial Chemical Sales Co.
Leghorn Trading Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Theobald Annual By-Products Refinery
Welch, Holme & Clark Co.
Woburn Degreasing Co.

PARADICHLORBENZENE

Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Merck & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING COMPOUNDS

Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer, Inc.
A. C. Drury & Co.
Felton Chemical Corp.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

PETROLEUM PRODUCTS

Anderson-Pritchard Oil Corp.
Atlantic Refining Co.
Sherwood Petroleum Co.
L. Sonneborn Sons.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrenthrum Extract, Derris Products

An-Fo Mfg. Co. (Extract)
W. Benkert & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
S. B. Penick & Co.
John Powell & Co.
Sherwood Petroleum Co.

SOAP COLORS

A. C. Drury & Co.
Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.

SOAP DISPENSERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products

SODIUM SILICATE

General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
Dobbins Mfg. Co.
Hudson Mfg. Co.
Lowell Sprayer Co.

TRI SODIUM PHOSPHATE

Bowker Chemical Co.
General Chemical Co.
Grasselli Chemical Co.
Swann Chemical Co.
Victor Chemical Works
Warner Chemical Co.

INDEX TO ADVERTISERS

For product classification see pages 118 *and* 120

* For Further details see announcement in 1935 SOAP BLUE

Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.

The 1935 SOAP BLUE BOOK

Contents

REFERENCE SECTION

How to Buy Sanitary Products—A symposium prepared by leading producers, giving standards for comparative evaluation of various types of powdered soaps, soap powders, scouring powders, liquid soaps, deodorizing blocks, metal polish, floor products, and coal-tar, pine oil and chlorine disinfectants. The buyer is given simple and easily applicable standards to guide him in the choice of products, and is warned of signs indicating low quality.

Soap Plant Design—Suggestions on plant layout, together with instructions for batch calculation. Accompanied by tabular material listing oil constants, saponification percentages, etc.

Trisodium Phosphate Detergents—A review of the composition of various type TSP cleansers, dishwashing compounds, scrubbing compounds, etc.

Federal Specifications for thirty soaps, chemicals, polishes, sanitary products, etc.

Peet-Grady Test for Household Insecticides—Complete revised official text.

F. D. A. Test for Disinfectants and Antiseptics.

BUYERS' GUIDE SECTION

A complete list of everything manufacturers and jobbers of soaps and sanitary products buy—raw materials, containers, machinery, bulk and private brand products, etc.—with "first hand" sources of supply for each. There are lists of suppliers of 428 separate items with cross references for several hundred more.

CATALOG SECTION

Sixty of the leading firms selling to the soap and sanitary product industries have filed their condensed catalogs in the Blue Book for ready reference. Catalog page numbers are given with all of their listings in the Buyers' Guide Section.

The SOAP BLUE BOOK is sent free to every SOAP subscriber. Annual charges for 12 monthly issues of SOAP plus the BLUE BOOK are $3.00, Domestic; $5.00 in Canada; $4.00 in other Foreign Countries.

MAC NAIR-DORLAND COMPANY

Publishers

254 WEST 31st STREET **NEW YORK CITY**